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A View in the Bird Sanctuary on Reclaimed Land.

THE WILSON BULLETIN

A QUARTERLY MAGAZINE OF ORNITHOLOGY

Vol. XXXVIII (Old Series) No. 3 September, 1926

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A BIRD SANCTUARY ON RECLAIMED LAND

BY FRANK M. WOODRUFF

Standing in the beautiful Bird Sanctuary in Lincoln Park, as wild a looking spot as you would find in the far west, it is hard to realize that fifteen years ago the waves of Lake Michigan rolled over this spot.

Three hundred acres of land have been reclaimed from the lake by first driving the outer piling, then filling this space with sand. A farm was purchased at Lemont on the Canal, and the rich swamp muck and loam brought on flat boats to form the surface of this newly made land. Ten acres of this forms the Bird Sanctuary.

The enclosure is fenced in, and the Commissioners of Lincoln Park are trying to devise some way of admitting the bird lovers. It is almost impossible to prevent stepping on a sandpiper's nest and frightening away the water birds. It has been suggested that a reservation be made one or two miles long and extending from the Lake to Sheridan Road, containing artificial lakes which could be planted with wild rice and vallisneria for the water birds, and hills and woods for the Passerine birds. We should all use every effort to bring about this conservation, or the space will probably be used for an eighteen hole golf course.

Mr. Poppe, the landscape gardner and tree expert of Lincoln Park, is planting many of our native fruit-bearing plants — huckleberry, strawberry, the crataegus trees, red and black haw. He has surrounded the ponds with swamp arum, vallisneria, wild rice, and even the American lotus.

It is really pathetic to see the attempts of the visiting water birds, rails, coots, bitterns and many other species, to find a nesting place here, as all of our nesting grounds for water birds have been destroyed in Cook County.

Twelve pairs of Spotted Sandpipers raised their young in this ten-acre spot in 1925, as well as two pairs of Killdeers, Green Herons, Soras, and King Rails. Catbirds, Robins and Yellow Warblers occupy almost every bush, and we are anxiously awaiting new surprises this year.

Great numbers of Black-bellied Plovers, Ruddy Turnstones, Least and Semipalmated Sandpipers, Pectoral Sandpipers, and in fact, all of our migrating shorebirds may be observed here. The Snowflakes and the Snowy Owl have been observed. A Golden Eagle was found dead on the shore.

While taking a walk last fall with Mr. Samuel Harper, we noticed a flock of small gulls in the upper end of Belmont Harbor. As it was too late for the Bonaparte Gulls we were curious to know what they were, and I had the pleasure of seing my first flock of Franklin Gulls. As we stood on the high bank, a short stocky gull left the flock, and as it slowly sailed under us we noticed a V-shaped patch on the back—our second record of the Kittiwake Gull, the first record being one that I shot twenty years ago.

Chicago Academy of Sciences,
Lincoln Park, Chicago, Illinois.

THE AUTOBIOGRAPHY OF FRANKLIN LORENZO BURNS

My life and ornithological experiences have been so far from the spectacular that I have little of general interest to communicate, though some incidents of my life-long and for the most part solitary novitiate, representing a supposititious investment of one hundred thousand dollars in energy and an actual expenditure of ten thousand dollars in cash, may not be devoid of novelty, especially as I have retained the status of a bona fide amateur, never having sold an egg, skin, manuscript or derived material benefit in the way of business.

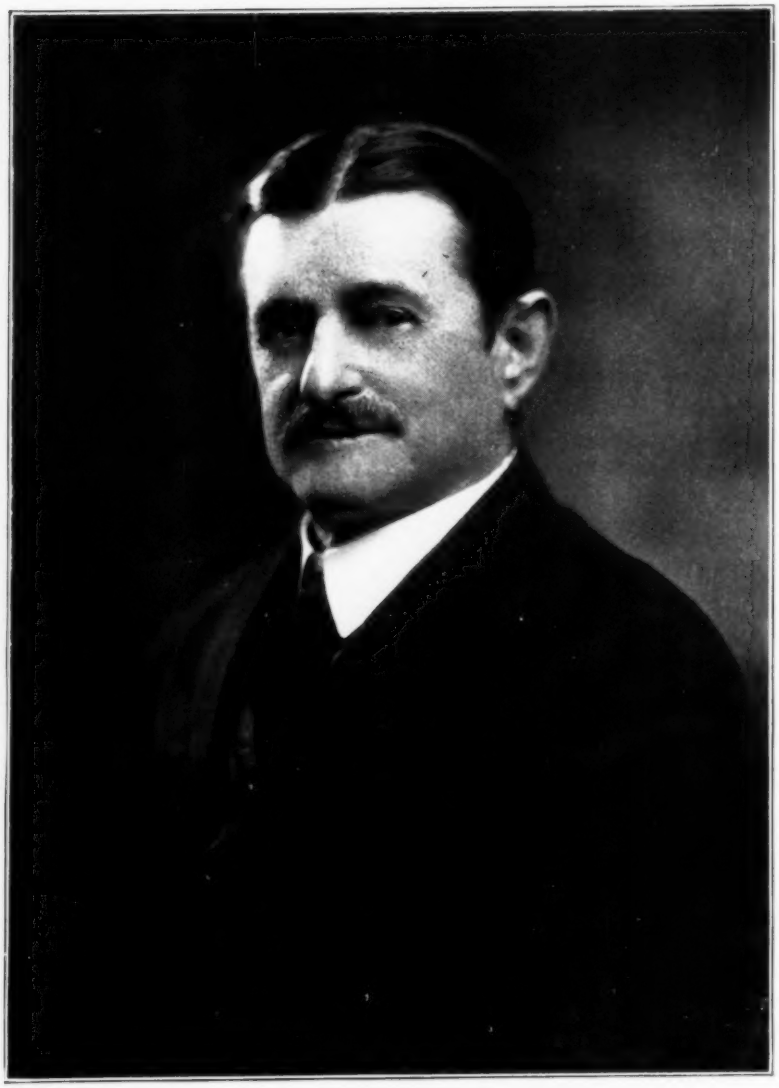
My earliest remembrance is that of a frightful childhood dream which still clings vividly to my mind. I thought that I ran in a panic through my dear old Quaker grandmother's herb and flower garden to the yard only to encounter a number of gigantic pachyderms, swart and sextuped, and though they paid not the slightest attention to the terrified boy in the Dolly Varden dress as he dashed through the herd and pattered over the flagstones to the Dutch door, he expected any moment to be caught up in the curling probosis of one of the monster Bulljacks, which became in my imagination the symbol of publicity.

My ancestors were mostly of Anglo-Saxon origin with an infusion of Welsh, Scotch-Irish and a dash of Gallic blood. Bern or Burn was the original surname, probably derived from the Norman Bjorn—a bear; of North England, transplanted in Wicklow, Ireland, about the time of James II as adherants of the Established Church, and Southeastern Pennsylvania in the Colonial period. My father's mother, an

Orthodox Friend, descended from Mary Culcop the first female born of English parents in Philadelphia. My mother's father, the only comparatively recent immigrant, was the son of a Yorkshire textile operator, and I have a few examples of his crude watercolors of birds painted for the amusement of his little daughter on the lonely banks of the Juniata. Therefore I cannot account for my early persistance on the ground of heredity though in my genealogical researches I find that I may lay claim to lineal descent from the eloquent Quaker preacher John Williamson, who in the instance of Benjamin West, early won tolerance for the fine arts from a most ascetic people; also to collateral kinship with John Cassin the systematic ornithologist.

I was born near the present village of Berwyn in Chester county, January 18, 1868, the fifth of eight children of Peter J. and Ellen J. (Dyson) Burns, and my earliest recollection of a desire to possess objects of Nature was due to the family doctor's promise of a "rabbit's egg" if I would take his allopathic prescription, and I pictured the shell as of a beautiful sky blue! Two or three years later I tagged after some older lads in their egging incursions and well remember the taking of the lovely blue eggs of the Dickcissel. At this time I was a frequent visitor at Hawthorn farm where a sportsmans' collection of mounted birds was a great attraction and here I secretly resolved to form a collection of my own and to learn the names and habits of the various kinds.

In the spring of 1877 we moved back to a part of the ancestral farm now in our possession a century. Unfortunately it necessitated a change from an excellent rural school to an inferior one a mile distant, a cheerless stone chamber crowded with the children of the railroad construction gang, ruled by a careless pedagogue, an intolerable place, how I hated it; and save for its practical arithmetic and my association with the grandsons of John Sartain the engraver, I owe it little. Meanwhile my three older brothers drifted away to occupations and homes of their own and father being engaged in building contracts, to me fell the numerous chores incident to a small farm, labor formerly apportioned to the quartet according to our strength. My solace was the small subscription library, the meeting place on Saturday nights of an agreeable coterie of youths; here I enjoyed Tom Brown's School Days and Trowbridge's juvenile stories, especially "The Scarlet Tanager" and Castlemon's Wild West tales were much in vogue with my associates, one of whom quietly remarked that he was going to see some of that life before it passed away forever and later he was among



FRANKLIN LORENZO BURNS

the dead in the Indian fight at Wounded Knee.

It was in 1884 that I learned of the publication of the "Young Oologist" and with improved methods laid the foundation for a local collection of eggs. I fashioned some malleable iron bars into the shape of climbers and with this crude contraption took my first set of Crow's eggs from a chestnut tree growing out of the old and then unvisited redoubt at Valley Forge. Though I have always been a lightweight and have since done considerable climbing without suffering vertigo, I began as a most timorous climber; however, I do not recollect ever backing down without reaching my objective.

My inseparable boyhood companion through all the youthful phases of fads was the late Willet E. Rotzell, later doctor and lecturer of biology at the Hahnemann College of Philadelphia. Many times he helped me finish some alloted task that we might have a few hours afield. I remember that when we later discovered an old edition of Coues' Key in town, I gave up a winter overcoat to possess a copy of my own.

I wish I could say that I had the parental consent to collect but it would not be true. My early collection of eggs was placed in cigar boxes, bedded in hair; the family quadrupeds were assiduously curried upon every accession to my stock and the boxes stowed under the barn eaves until in my judgment it was safe to remove to more commodious quarters in the attic. Wiseacres seriously questioned the utility of my endeavors and the ignorant queried: "Are you going to eat 'em or set 'em"—no other disposition being thought tenable.

The following year I began an abbreviated report to the A. O. U. committee on migration and a collection of bird skins. My first specimen, that of the Short-eared Owl, was preserved with "Rough on Rats," for I was forbidden to bring arsenic on the place! I made the common mistake of the tyro when I severed the leg bone at the heel, but the skin is still intact. I withdrew my little from a saving fund to take some lessons in taxidermy with Krider and also visited the museum of the Academy of Natural Sciences where I doubt not my impressions were similar to those of a recent guest at Tutankhamen's tomb. At this age my only text book was Porter and Coates' cheap edition of Wilson's American Ornithology more than a half century out of date, found in the village library; luckily the vernacular names were similar to those taught me by my father who was fond of hunting and never very consistently opposed my study.

I had not far to go for specimens, my favorite ground within three minutes walk was a worn-out clearing with a second growth of cedar

and berry bushes connecting a slashing of virgin soil, a jungle in luxuriance of sapling and vine, and the adjacent woodland of hill and ravine for miles along the slate ridge. Indeed my work has been confined mainly to this section, with a never-to-be-forgotten vacation with Lionel F. Bowers to Great Egg Harbor Bay, New Jersey, the type locality of some species of Wilson, Ord, Audubon and other worthies of times gone by. My friend recently reminded me of the occasion when I pulled him out of a slough in which he was fast sinking, but I remember best another rescue, when marooned on an islet in the gathering dusk and incoming tide, my friend appeared in a boat.

My earliest endeavors were linked with the Wilson Ornithological Club and I believe that I have served in every office except that of vice president. This club is the outcome of an earlier boyish organization away back in 1885, a period when amateur journalism flourished. Many youths combined the craze for printers' ink with the oological fad. The "Young Ornithologist" published in Boston, became the organ of the Young Ornithologists' Association which expired with the "Curlew" in 1889, to leaven the newly organized Wilson Ornithological Chapter of the Agassiz Association; of the original coterie, Drs. Pindar, Jones, Strong, and myself *sans* title, remain.

These organizations, followed by the Wilson Ornithological Club, long exponent of co-operation and specialization, conducted a generation of bird lovers from kindergarten to college. Late in 1900, soon after Jones had brought out my monograph of the Flicker, he wrote me that he would be unable to publish the BULLETIN the year following and suggested that I take up the burden for that period. The treasury was exhausted and my own time occupied with ten or more hours of physical labor beside evenings of accounts, estimation and correspondence, but I probably saved the little journal for the time being at some expense to myself.

The same year I brought out my sectional bird census, the pioneer attempt to enumerate a definite square mile of bird life and I say not in criticism of later efforts in this line but as a matter of record, that this work was not blithely consummated on a fair day in June but in a conscientious attempt to locate the individual nesting places, the labor of a season. Often, wet to the shoulders, I came in for a hurried breakfast and then rushed off to work without change of clothing, doubtless the source of later sciatica.

Personally I know that the difficulties of expression are enormously increased by a lifetime of manual labor and in all probability

I never would have attempted composition had I not become convinced that it was my duty to add my mite to our knowledge.

Though solitary observation has its disadvantages I have always felt that I could get better results alone. My study of the domestic economy of our local Wood Warblers, quoted in Chapman's Warbler book, was accomplished single-handed. I searched ten years before I found the Worm-eating Warbler nesting plentifully almost at my back door and therefore I was much gratified by the assurance of the late Thomas H. Jackson that mine was the most accurate biography of the species he had ever read.

When I intimate the advantages of lone observation perhaps I make the most of the peculiar situation which the dilettanti of scant means and remoteness experience. Soon after Dr. McCook moved into our neighborhood he appealed to me for a list of advanced students in all branches of Natural Science, with the object of forming a local society; my canvass revealed the species as quite rare. It is otherwise in antiquarian lore and I here confess to a love of local history in which I have had for a score of years the comradship of the late Rev. Dr. Quimby, author of "Valley Forge", who first performed his ecclesiastical duty and a wide charity, yet had the energy to do upward of fifty miles on foot for the pleasure of historical research. I yet have to redeem my promise that I would gather in permanent form my own researches in local tradition and fact, which he thought more extensive than his own.

My good mother had often predicted that sometime I would fall from a lofty tree in some remote place and perhaps perish before found, but when I fell it was from the high gable of a building and during my five weeks' convalescence I found time to start a compilation of some sketches on Alexander Wilson.

I had long desired a small detached building in which to house my specimens and books as well as to serve as a quiet place for study. When this was accomplished in 1904, I found I had placed it too near the road, for some leisurely person was sure to drop in for the evening. Children would peep in at the window and often run away when I opened the door to bid a possible future ornithologist enter. Now and then I have a most welcome visitor, some one perhaps from afar. Once it was the late Frederic B. McKechnie from down East, who had loaned me a great mass of original material relating to our earlier ornithologists; later R. M. Barnes, of the *Oologist*, spent an afternoon in discussion of my contemplated bibliography of ornithological periodicals, which he so generously offered to publish. And I have guided

to the habitat of some of our local rarities some keen oologists. About this time I often had the company of Charles H. Rogers, Alfred C. Redfield, and Leonard Pierson, high school boys, non-collectors, good observers; one an excellent photographer; but they soon departed for college; later Guy L. Eadie, now with the National Zoological Park.

Years ago I planned an exhaustive study of the nesting habits of our birds, the printed forms called for an appalling amount of detail and the material returned proved inadequate; nevertheless the resultant papers on comparative periods of incubation, nestling life and nest-building appeared worthwhile as preliminary studies.

My business for the past thirty-five years has been that of a contracting painter. Twice I have had the labor unions' well nigh impossible demands disperse the shop in which I had tried to instill the *esprit de corps* so essential to efficient work. During the trying summer of 1919 I carried on with a single aid, a veteran color-bearer of the Civil War. Early in my business life I fixed upon a modest sum at which I could retire and devote more time to the birds, bees and garden; when this seemed within reach I found that the dollar had shrunk in purchasing power.

My public services have been small and extremely local. I served for a term of years as financial secretary to the volunteer fire company, beginning at a time when the organization was at its lowest ebb and ending when an efficient gasoline engine supplanted the primitive handtruck. I have also served for many years as a director of the building and loan association, and with the court of honor for the boy scouts, but have been absolutely unequal to public bird talks. As this is in the nature of a confessional I will plead to an unmarried state, perhaps because of an incurable egoism, congenital shyness, failure to discover my ideal, prior claims of relatives or a combination of circumstances, who can say? I am fond of children and dogs—some children and some dogs—and can generally make friends with them.

For some time I had contemplated an avifaunal list of my native county and when the opportunity came to have it published in a desirable form, the World War, a strike, and the plague delayed the printing, necessitating proof-reading at a most inopportune time when burdened with a press of work in the heat of summer and resulted in some unfortunate typographical errors in technical names. Inadvertently I trampled some of the morning-glories! I had thought my work meritorious in comparison with like publications and the faults

superficial, nevertheless I purchased the remainder of the edition and withdrew it from circulation.

I have taken relatively few specimens in the last twenty years, not that I ever have been a great destroyer of bird life, for my collection is very incomplete, but because I am more concerned with data obtainable from the living bird; at the same time I regard all assertions that the public museum renders private collections superfluous as pure buncombe.

I have not attempted to analyze my preference for the study of birds, though undoubtedly I have followed my inclinations, and my persistance was not unmixed with a desire to prove that it is open to all; herein I erred, for the multiplicity and cost of the literature almost indispensible to keep abreast of the times has become prohibitive to the student of humble means. And then there is the matter of permits; Pennsylvania for instance provides a license for the professional teacher and a special one for the person "of known scientific attainments in ornithology," obtainable through the Game Commission! The beginner and would-be-collector may therefore condole with the heroine of that ancient ditty:

" 'Mother, may I go in to swim?' 'Yes, my darling daughter!
Hang your clothes on a hickory limb and don't go near
the water!' "

Our Commonwealth is vastly more liberal in the matter of gunners' licenses since it permits anyone to kill a liberal number of every kind of game provided he can do so. With over half a million sportsmen in the field it is possible to exterminate every game animal in the State without the average hunter taking his legal quota.

It is probable, especially in my earlier years, that there has been a great deal of misdirected effort upon my part. Properly directed as a training for accurate observation and logical thought, ornithology is a great study. It is always possible with one of the several low-priced and excellent textbooks, field glass and notebook, to derive much pleasure in bird study as a pastime and by specialization gain some knowledge not laid down in books.

One can truly state that notwithstanding a more or less tentative classification and a rather unstable nomenclature, ornithology has advanced steadily in recent years. Its popularization without deprivation of the essence of science by some of our leaders, has enormously increased the number of laymen and their interest, and has opened the way for an exhilerating relaxation from the daily grind.

Berwyn, Pa.

NOTES ON BIRDS OF PINELLAS AND PASCO COUNTIES, FLORIDA

BY WM. G. FARGO

In the years 1923-24-25 and '26, the writer has arrived in Florida about the middle of January and has spent some time, usually several months, at Pass-a-Grille, which is on Long Key on the west coast and at the north side of the mouth of Tampa Bay. In 1925 the entire time until April 10 was spent here in Pinellas County, and in 1926 practically all the time from January 11 until May 17.

Frequent excursions for bird study have been made to various parts of Pinellas County and into southern Pasco County, which joins Pinellas on the north. Pinellas County is a peninsula, bounded on the east and south by Tampa Bay and Old Tampa Bay and on the west by the Gulf of Mexico. Tarpon Springs is within and near the north boundary of Pinellas County and the observations on bird life, recorded in this paper, reach some six miles into Pasco County or about half way from Tarpon Springs to New Port Richie.

Thus the territory covered is essentially that Florida region in which W. E. D. Scott principally worked between 1879 and 1888. The present notes therefore in a measure will indicate the changes in bird life of this territory after a lapse of about 40 years. During this time Pinellas County has become thickly settled.

In general it may be said that the birds at all common during the years of Mr. Scott's observations may be seen in this territory today, but it is quite uncertain how long this condition will hold, as the central and southern portions of the state are being settled and cleared with great rapidity.

Great progress in Florida has been made in the past few years in creating public sentiment toward the protection of birds and enormous areas have been put into reservations where no killing of wild life is permitted. The last Florida legislature passed an Act providing for an adequate organization to enforce the existing game laws. The County Commissioners of Pinellas County at their spring session of 1926 voted to recommend to the next state legislature the setting aside of the whole county of Pinellas as a wild life reservation.

At present there are continuous reservations west of the Tamiami Trail, along the Gulf Coast of Florida, through Sarasota and Charlotte Counties and that part of Lee County south of the Caloosahatchee River and thence through Collier County down into the Ten Thousand Islands. In Tampa Bay there are two large and three small keys

which have been made Federal reserves. In these protected areas the birds soon lose their fear of a man and here in Tampa Bay close to populous communities, both of the egrets are breeding in numbers.

Before proceeding further it will be well briefly to outline the topography of the region covered by these notes.

As its name implies, Pinellas County originally consisted for the most part of (flat) pine woods. Between Clearwater and Tarpon Spring, however, the country is rolling, with ponds in many of the hollows. The soil throughout is sandy and hammock areas are few.

East of Tarpon Springs, there are high ridges on both sides of Lake Butler. All along the coast line bayous indent the shore.

Along Tampa Bay, especially towards its mouth, are vast areas of mud flats covered by water at high tide. These provide winter feeding ground for vast flocks of mixed "shore birds"; and numerous herons, gulls, and terns feed or nest there on the bars. Later, the resident gulls, terns, and Black Skimmers nest there as do some shore birds.

Such creeks as there are in Pinellas County are small, short, and unimportant. The Gulf beaches on the keys in Pinellas County are of sand and shells. The inner beaches on the mainland are usually covered with short marsh grass.

At the mouth of the Anclote River and thence northward, the Gulf shores are covered, often for great widths, with needle pointed tules often growing higher than a man's head and into which the tide rises.

Mangroves cover many of the keys and line much of the shore of the mainland.

On Bird Key (called Indian Key on some maps) off Maximo Point on the north side of and near the mouth of Tampa Bay, the nests of herons, egrets, ibises, and cormorants are in mangroves at heights of eight feet, to about twenty-five feet.

When Mr. W. E. D. Scott visited this key in the early summer of 1886, after an absence of seven years, he found that plume hunters had killed off the birds and what was once a vast breeding colony of divers species was only "a deserted mangrove island". In 1924, eighteen years after this key became a Federal reservation, there were nesting here sixty or more pairs of American Egrets, great numbers, perhaps 500 pairs, of White Ibises, moderate colonies of Ward's Herons, Little Blue, and Louisiana Herons, small colonies of both Black-crowned, and Yellow-crowned Night Herons, and probably nearly a thousand pairs of Florida Cormorants. Small numbers of Snowy Egrets nest here, and several hundred pairs of Brown Pelicans.

The Wards' Herons, Mrs. Katherine B. Tippetts, of St. Petersburg, tells me, have young in the nest nearly every month in the year, the season of greatest activity being the first six months of the year. The American Egrets begin nesting in February, while the smaller herons begin nesting early in April, as do the White Ibises, cormorants, and Brown Pelicans in this territory.

On Bird Key there are always a few (say 12 to 20) Fish Crows about seeking an opportunity to steal eggs while the owner is off the nest; however, the eggs are seldom left alone and it does not appear that many eggs are taken by crows. The warden, acting on orders from the Biological Survey, is shooting the crows with a .22 caliber rifle equipped with a silencer, and has also attempted to poison them with treated hens' eggs placed in empty nests. Owing to the wariness of the crows neither of these methods has been very successful.

While on the Key in 1925 and 1926 a Fish Crow entirely devoid of a tail was repeatedly seen. It seemed to fly about as well as the others but would not venture from cover in a stiff wind.

Mr. Harold Bennett, the warden in charge of the Tampa Bay reservations, writes me that in June, 1926, he found something was eating the young herons, leaving only the feet and bills. There are usually a few Black Vultures and Turkey Buzzards on the Key, perhaps less than a dozen of each. Suspecting these birds, he killed as many as possible and noticed no further trouble.

The other large key of the Tampa Bay Reservations, known both as Bush Key and as Tarpon Key, lies two miles to the south of Bird Key. While well adapted to bird nesting by reason of its cover of large mangroves, it is practically untenanted by nesting birds with the exception of a few Ward's Herons.

Southern Pasco County is somewhat rolling, it has more streams than Pinellas, there are more areas of hammock growth and much of the flat pine woods area is thoroughly cut up with small cypress swamps, usually occupying narrow depressions, winding about the plains. In this varied topography the tree growth and vegetation are also varied and here may be found a variety of birds not often seen elsewhere in the territory described.

On islands in fresh water ponds, the Anhinga and White Ibis nest as do the Florida Gallinule and the Coot. In the above described pine woods are found Pileated, Red-headed and Red-cockaded Woodpeckers, also the southern forms of the Hairy and Downy Woodpeckers. The Red-bellied Woodpecker is everywhere abundant. Here also are seen the Carolina Chickadee and the Florida White-breasted Nuthatch.

Doubtless the Brown-headed Nuthatch is here but the writer has not discovered it.

Along the salt marshes of the coast are found during early spring Scott's Seaside Sparrow and Marian's Marsh Wren.

The settlement of Pasco County has not yet reached a point resulting in the destruction of any considerable amount of bird coverts, hence the variety and amount of bird life is greater than in the more populous County of Pinellas. Little change in the avifauna of this region seems to have occurred in the past forty years.

In the following annotated list of birds of Pinellas and southern Pasco Counties, no records of species have been introduced where there was any reasonable doubt of identity. Specimens were collected of those species or forms marked * and these have been, in large part, deposited in the Museum of Zoology of the University of Michigan at Ann Arbor.

The writer desires to acknowledge the kindness of Mr. A. C. Bent in giving permission to use the various 1925 records credited to him in the text, and for identifying skins of Caspian Tern, Cuban Snowy Plover, Sharp-tailed Sparrow, Scott's Seaside Sparrow, Pine Woods Sparrow, Bachman's Sparrow, Sycamore Warbler, Long-billed Marsh Wren, and others.

For the determination of the Grasshopper Sparrow we are indebted to Mr. James L. Peters of the Museum of Comparative Zoology. For the determination of the Red-winged Blackbirds we are indebted to Dr. Charles W. Richmond and Mr. Arthur H. Howell, of the United States Biological Survey.

My own observations in the following list were made between January 11 and May 17, 1923, and during the same period in 1924, 1925, and 1926. If the year is not specified it may be understood to be 1926.

[The following list contains 184 named forms.—Ed.]

Horned Grebe—*Colymbus auritus*. A not uncommon winter resident.

Pied-billed Grebe—*Podilymbus podiceps*. Not uncommon in fresh water ponds.

*Loon—*Gavia immer*. Common winter resident in salt water. Not seen in breeding plumage.

Herring Gull—*Larus argentatus*. Common winter resident, the adults left early in April, the immature birds remaining until after the middle of April, 1926.

*Ring-billed Gull—*Larus delawarensis.* Common winter resident, although in fewer numbers than the preceding. The younger birds remained for several weeks after the adults left and then commonly were seen in flocks of fifty or more.

*Laughing Gull—*Larus atricilla.* Common resident; about 400 present on breeding ground south of Long Key, in May, 1926. Courtships began March 20, but no nests found on May 11.

*Bonaparte's Gull—*Larus philadelphia.* Occasional in winter. Not seen in 1926. None seen in summer plumage.

*Caspian Tern—*Sterna caspia imperator.* Three seen from late March to April 22, 1926. One collected from three seen January 26, 1925.

*Royal Tern—*Sterna maxima.* Common resident, breeds. A few in the dark hood by March 1, but some do not acquire it until a month later.

*Cabot's Tern—*Sterna sandvicensis acuflavida.* Mr. A. C. Bent "saw several and collected one" in the spring of 1925.

*Forster's Tern—*Sterna forsteri.* Not uncommon as a winter resident.

*Least Tern—*Sterna antillarum.* Appeared on Long Key, April 18, 1926, when a flock of twenty-seven were seen. On May 11, there were seventy or eighty at the nesting place on the first bar south of Long Key, at which time there were but four nests, only one having as many as three eggs. Nesting had just begun. Many Least Terns were also seen at Indian Pass, near Indian Rocks, Florida.

*Black Tern—*Chlidonias nigra surinamensis.* May 11 a flock of about sixty were seen at sunset on a bar south of Long Key. Not seen before nor afterward.

*Black Skimmer—*Rynchops nigra.* Common resident. They rest during the day on various bars where they are not likely to be disturbed, in flocks of 200 to 300. Nesting had not begun near Pass-a-Grille, on May 11, 1926.

*Water Turkey—*Anhinga anhinga.* Found in fresh water ponds in northern Pinellas and Southern Pasco Counties. Young in nests at least two weeks old on April 7, 1925. Not uncommon throughout Florida in suitable locations. They often flap and sail alternately and when they alight in water, submerge so that only the slender neck and head appear. In reedy creeks they are hard to flush.

*Florida Cormorant—*Phalacrocorax auritus floridanus.* Common resident. The crests appear on some birds early in March and are not seen after the breeding season, which begins about April first. Per-

haps about 1,000 pairs nest in the mangroves on Bird Key, about twenty feet up. There is another Cormorant rookery on the coast near Ozona, Pinellas County. During the years 1925, '25, '26 the cormorants have roosted on a bar just south of Long Key in numbers estimated in 1925 at 3,000.

White Pelican—*Pelecanus erythrorhynchos.* Seen during the winter months in flocks from three to twenty.

*Brown Pelican — *Pelecanus occidentalis.* Common resident. About April 10 they begin nesting at Bird Key. Prior to that time they rest and roost in large numbers on the bars south of Long Key, but during the breeding season only immature birds and non-breeding birds are seen there. Some adults have the dark neck early in March.

Frigate Bird—*Fregata aquilla.* Rarely seen in winter. They become more common early in March and gradually increase in numbers. On May 14, 1926, between 5:15 and 5:45 A. M. (before sunrise) there were counted 250 Frigate Birds sailing southeasterly over Long Key going to the Gulf from their roost on Bird Key. Mrs. Katherine B. Tippetts tells of seeing thousands of them here during mid-summer in recent years where they rob the pelicans. The writer has not seen them molesting other birds. They are not known to breed here. In a thirty-five mile gale they can turn in the air as on a pivot and move off in the opposite direction without flapping their wings.

*Red-breasted Merganser—*Mergus serrator.* Common winter resident. In the early spring of 1925 there were flocks up to several thousand about Tampa Bay. From January to May, 1926, only flocks of a score or two were seen. They are seldom molested by hunters.

Florida Duck—*Anas f. fulvigula.* Occasional.

Pintail—*Dafila acuta tzitzihoa.* Occasional in early spring.

Wood Duck—*Aix sponsa.* Two pairs seen several times in February and March, 1926, on Holmes' Pond northeast of Clearwater.

*Lesser Scaup—*Marila affinis.* Most common duck in Florida in winter and are seen in both salt and fresh water. Many about as late as the middle of May, 1926.

*Ring-necked Duck—*Marila collaris.* February 8, 1926, saw four pairs on the pond next east of Holmes' Pond. A male duck collected in Pinellas County, April 2, 1925, appears to be a hybrid between *M. affinis* and *M. collaris.* This duck was found resting on the mainland beach opposite John's Pass. Apparently it was ill or injured although when skinned no wounds nor injuries were visible. The head and neck are essentially those of *M. collaris,* and it has the white chin patch of *collaris* although small, being one-fourth inch by three-six-

teenths inch. The upper breast is a little darker than *affinis*, likewise the back. The bill has the appearance of *affinis*, to which species it has more points of resemblance, as the speculum is white.

Roseate Spoonbill—*Ajaja ajaja*. Early in April a few birds usually appear about Tampa Bay. In July it is more common. There is no evidence of its nesting here.

*White Ibis—*Guara alba*. The White Curlew is uncommon here in winter. Usually a few including immatures at Bird Key then. Later the immatures are not often seen here. Late in March or by the first of April the adults begin to appear in flocks at their breeding places. During the years under the writer's observation a colony of several hundred pairs has bred on Bird Key, another of at least 50 pairs on an island in Holmes' Pond and a larger colony bred in 1926 south of Tarpon Springs. The nests are in bushes eight to twelve feet above ground, frequently there are green leaves in the nest; the eggs are laid early in April. The White Ibis feeds in both salt and fresh water, but seems to prefer the latter. They are easily approached.

Wood Ibis—*Mycteria americana*. The Flinthead is seen in small numbers from January to March, sometimes alone and sometimes with herons and egrets.

Bittern—*Botaurus lentiginosus*. Not uncommon in suitable localities, both in salt and fresh water marshes.

*Least Bittern—*Ixobrychus exilis*. Occurs same as last above.

Ward's Heron—*Ardea herodias wardi*. Well distributed throughout the state. Seems to nest nearly throughout the year except perhaps the last three months of the year.

*American Egret — *Casmerodias egretta*. Well distributed over the state. Common resident around Tampa Bay. They begin nesting early in April and forty to seventy-five pairs nest on Bird Key. Fewer nested there in 1926 than in the two years preceding.

*Snowy Egret—*Egretta c. candidissima*. Appears well distributed now over the Gulf Coast of Florida. Have never seen over twenty individuals together. The warden states that they nest on Bird Key. One was seen going on to its nest by A. C. Bent in 1925.

Reddish Egert—*Dichromanassa rufescens*. Rare now; seen in 1925.

*Louisiana Heron—*Hydranassa tricolor ruficollis*. Common and well distributed. Begins nesting early in April.

*Little Blue Heron—*Florida caerulea*. Same as last.

Green Heron — *Butorides v. virescens*. Common, especially in fresh water streams and ponds; breeds.

*Black-crowned Night Heron—*Nycticorax n. naevius.* Well distributed; nests early in April. A few appeared to be nesting on Bird Key in 1925.

*Yellow-crowned Night Heron—*Nyctanassa violacea.* Less common than the last; also nests on Bird Key early in April, well up in larger trees.

*Florida Clapper Rail—*Rallus crepitans scotti.* Common in salt marshes; nests in April and May.

Carolina Rail—*Porzana carolina.* Occasional.

Florida Gallinule—*Gallinula chloropus cachinnans.* Common on fresh water ponds and sometimes on brackish water. Breeds here.

Coot—*Fulica americana.* Common on fresh water ponds and at times seen on salt water.

Wilson's Snipe—*Gallinago delicata.* Not uncommon in winter and spring.

*Dowitcher—*Limnodromus g. griseus.* Common winter resident, leaves in April or early May.

Long-billed Dowitcher—*Limnodromus griseus scolopaceus.* Occasional in winter.

*Knot—*Calidris canutus.* Occasional in winter in the gray plumage, in flocks of fifty or more. In May this late migrant appears in numbers on the mud flats of Tampa Bay. A flock of 200 was seen on Mullet Key, May 14, 1926. They were not yet in full red plumage.

Pectoral Sandpiper—*Pisobia maculata.* Only seen in migration. (March 31, 1926).

White-rumped Sandpiper—*Pisobia fuscicollis.* A few in migration, May 14, 15, 1926.

Baird's Sandpiper—*Pisobia bairdi.* Migrants, May 14, 15, 1926.

*Least Sandpiper—*Pisobia minutilla.* Exceedingly common from January 11 to May 17 (the latter date ending observations).

*Red-backed Sandpiper—*Pelidna alpina sakhalina.* Same as last except in lesser numbers.

*Semipalmated Sandpiper—*Ereunetes pusillus.* Not common during winter, but numerous in May. Typical specimens may be distinguished from *P. minutilla*, in life, by the dark legs, stumpy bill and grayer appearance of back. Flocks of 200 seen up to May 17, 1926.

*Western Sandpiper—*Ereunetes mauri.* During winter often seen in small numbers with the other small sandpipers.

*Sanderling—*Crocethia alba.* Common in winter, leaves last of April.

Marbled Godwit—*Limosa fedoa.* One seen near Pass-a-Grille, March 2, 1925, and one at Cedar Keys, Florida, February 19, 1923.

Greater Yellow-legs—*Totanus melanoleucus.* Occasional.

Yellow-legs—*Totanus flavipes.* Less common than last.

Solitary Sandpiper—*Tringa s. solitaria.* Occasional in March.

*Willet—*Catopthrophorus s. semipalmatus.* Numerous in suitable localities about Tampa Bay in winter. Flocks up to 800 rest or roost on bars near Gulfport in 1925-26. They leave in late April and early May for their breeding places in the salt marshes along the Gulf coast, from the Anclote River northward.

*Western Willet—*Catoptrophorus semipalmatus inornatus.* Common in migration. Is said not to breed here.

Spotted Sandpiper—*Actitis macularia.* Few in numbers but not uncommon after February first.

Hudsonian Curlew—*Numenius hudsonicus.* In small numbers in April and May, 1926.

*Black-bellied Plover—*Squatarola s. cynosurae.* Common winter resident, leaving before the middle of May and before entirely attaining the breeding plumage.

Killdeer—*Oxyechus v. vociferus.* Common winter resident in small flocks.

*Semipalmated Plover—*Charadrius semipalmatus.* Common winter resident, more numerous than last.

*Piping Plover—*Charadrius melodus.* Seen in flocks of twenty to fifty in winter with the Cuban Snowy Plover.

*Cuban Snowy Plover—*Charadrius nivosus tenuirostris.* Not uncommon resident, appears to breed around mouth of Tampa Bay.

*Wilson Plover—*Pagolla w. wilsonia.* Common after March first. Earliest record, February 27, 1926. Nests on the little dunes which collect about tufts of beach grass. Lays three to four eggs, hatching about middle to last of May.

*Ruddy Turnstone—*Arenaria interpres morinella.* Common winter resident, never many together.

*Florida Bob-white—*Colinus virginianus floridanus.* Common resident, but becoming less numerous as the country is settled.

*Mourning Dove—*Zenaidura macroura carolinensis.* Common resident. Four taken from a flock, February 10, 1926, were all males.

*Ground Dove—*Chaemepelia p. passerina.* Common resident; breeds.

Turkey Vulture—*Cathartes aura septentrionalis.* Common resident; breeds.

*Black Vulture—*Coragyps u. urubu.* Common resident; breeds.

Marsh Hawk—*Circus hudsonius.* Common resident; said to breed.

Sharp-shinned Hawk—*Accipiter velox.* Common resident.

*Cooper's Hawk—*Accipiter cooperi.* Common resident.

Red-tailed Hawk—*Buteo b. borealis.* Common resident; breeds.

*Florida Red-shouldered Hawk—*Buteo lineatus alleni.* Common resident; breeds.

*Broad-winged Hawk—*Buteo p. platypterus.* Not uncommon in winter.

Bald Eagle—*Haliaetus l. leucocephalus.* Common resident; breeds in numbers around Tampa Bay and adjacent Gulf shores. Often found close to populous communities. There are several nests, used from year to year on two of the golf links adjacent to St. Petersburg. Usually where pine trees provide suitable nesting places a pair of these eagles will be found in about every mile of shore line in this vicinity. Food is largely fish; some duck bones were found under nests, these being mostly merganser. They lay about December first and the young leave the nest in this latitude in March.

*Duck Hawk—*Falco peregrinus anatum.* Rare winter visitor, an adult female was taken March 11, 1925.

*Sparrow Hawk—*Cerchneis s. sparveria.* Common resident, but more numerous in winter. The migrants leave about March 15. *C. s. paulus* was not taken in this territory. A number of the smaller and darker birds were collected, but all proved to be *C. s. sparveria.*

Osprey—*Pandion haliaetus carolinensis.* Not uncommon resident. An empty nest found on Bush Key in 1924, had the appearance of an Osprey's nest. No other personal evidence of its breeding in this region.

*Barn Owl—*Tyto alba pratincola.* Resident; not common.

Short-eared Owl—*Asio flammeus.* Resident; not common.

Florida Barred Owl—*Strix varia alleni.* Common resident; breeds.

Great Horned Owl—*Bubo v. virginianus.* Mr. A. C. Bent reports a set of eggs taken on the Pinellas Peninsula, by Mr. Oscar E. Baynard of Plant City, Florida, in 1925.

*Florida Screech Owl—*Otus asio floridanus.* Not uncommon resident; breeds. The one specimen taken in 1925 and the one in 1926 were in red phase and both found dead in paved road.

Yellow-billed Cuckoo—*Coccyzus a. americanus.* Rather uncommon. Not seen in winter; earliest record, April 20. Is said to breed.

*Belted Kingfisher—*Ceryle alcyon alcyon.* Common resident; more numerous in winter.

*Southern Hairy Woodpecker — *Dryobates villosus audubonı.* Rather uncommon resident; breeds.

*Southern Downy Woodpecker—*Dryobates p. pubescens.* Fairly common resident; breeds.

*Red-cockaded Woodpecker—*Dryobates borealis.* Not uncommon resident of pineries; breeds.

*Yellow-bellied Sapsucker—*Sphyrapicus v. varius.* Not common winter resident.

*Pileated Woodpecker — *Phloeotomus pileatus.* Not uncommon north of Tarpon Springs and elsewhere in suitable hammocks.

Red-headed Woodpecker — *Melanerpes erythrocephalus.* Uncommon resident. Seldom seen in 1925-26 in southern Pinellas County.

*Red-bellied Woodpecker—*Centurus carolinus.* Abundant throughout the state; breeds.

*Flicker—*Colaptes a. auratus.* Abundant resident; breeds.

*Chuck-will's Widow—*Antrostomus carolinensis.* Common, arriving in March. Earliest nesting record March 24, 1925. The first syllable of the call is heard only when within about 100 yards of the bird. Across water, the latter syllables may be heard readily a mile away. One bird, heard repeatedly at Bonita Springs, Florida, gave the call "Chuck-widow-will." The birds heard in Lee County in April, 1926, seemed to give a louder and more distinct "chuck" than the birds of farther north.

Whip-poor-will — *Antrostomus v. vociferus.* A not uncommon migrant, and probable winter resident as one was seen by Mr. A. C. Bent in this territory in December, 1924. One was seen by the writer at Gainesville, Florida, February 17, 1923.

Nighthawk—*Chordeiles v. virginianus.* Seldom seen by the writer in Pinellas or Pasco Counties, and no birds were collected there. One taken in Lee County was *C. v. chapmani.*

Ruby-throated Hummingbird—*Archilochus colubris.* Not seen in winter. Early records: March 1, 1925; April 8, 1926.

*Kingbird—*Tyrannus tyrannus.* Common summer resident. First record in 1925, March 21; in 1926, March 24.

*Gray Kingbird—*Tyrannus d. dominicensis.* Common summer resident, arriving about April 18, 1926.

Crested Flycatcher—*Myiarchus crinitus.* Common summer resident. Early records: 1925, April 9; 1926, April 1.

Phoebe—*Sayornis phoebe.* Rather common winter resident.

*Florida Blue Jay—*Cyanocitta cristata florincola.* Common resident.

*Florida Jay—*Aphelocoma cyanea.* Rare in this territory, arriving early in April; breeds. Saw a pair building a nest near Gandy Bridge, April 9, 1925, and collected a pair near Indian Rocks, April 7, 1926.

Crow—*Corvus brachyrhynchos.* Not common; a few seen around a slaughter house north of Tarpon Springs in March and April, 1926.

Fish Crow—*Corvus ossifragus.* Common locally; feeds in flocks. It is often found around habitations and at the heron rookeries awaiting a chance to steal eggs. Steals many hens' eggs. Has a habit of taking its food to one certain place to eat it.

Bobolink—*Dolichonyx oryzivorus.* Migrant; not common on west coast.

*Red-winged Blackbird—*Agelaius phoeniceus phoeniceus.* Common resident (?); breeds. Young were flying May 6, 1926.

Northeastern Redwing—*Agelaius phoeniceus predatorius* (Wilson). Common winter visitor; probably does not breed here.

A series of ten of the breeding form of Redwing taken by the writer in Pinellas County in the first half of April, 1926, were sent to the U. S. Biological Survey, and Mr. Charles W. Richmond, Associate Curator, Division of Birds, writes regarding these specimens under date of August 14, 1926, as follows: "Mr. Arthur H. Howell reports the specimens to be typical *Agelaius phoeniceus phoeniceus*, which ranges from Carolina to Florida, the bird of the eastern and northeastern parts of the United States being *Agelaius phoeniceus predatorius* (Wilson), as shown by Dr. Mearns. All of this is at variance with the last edition of the Check-List but it probably reflects what will be given in the next edition."

Dr. Donald R. Dickey also reached the same conclusion regarding the form breeding in Pinellas County from a series of twelve sent to him by Mr. A. C. Bent in 1925.

*Southern Meadowlark—*Sturnella magna argutula.* Common resident; breeds; young were flying May 9, 1926.

Orchard Oriole—*Icterus spurius.* Appears April 1 to 3; breeds in northern Florida.

Rusty Blackbird—*Euphagus carolinus.* A few were seen late in March, 1925.

Florida Grackle—*Quiscalus quiscula aglaeus.* Common locally in many parts of Florida but not observed by me in Pinellas or Pasco Counties.

*Boat-tailed Grackle—*Megaquiscalus m. major.* Common resident; breeds. The males, the young males, and the females each flock by themselves in winter.

Goldfinch—*Astragalinus t. tristis.* Rather common winter visitor, and usually leaves early in March.

Vesper Sparrow—*Poecetes g. gramineus.* Occasionally seen as a winter visitor; leaves in late March.

English Sparrow—*Passer d. domesticus.* Common resident; not observed to nest in winter.

*Savannah Sparrow—*Passerculus sandwichensis savanna.* Except the last, is the most common sparrow in winter. Left about April 15, 1926, except for a few stragglers.

*Grasshopper Sparrow—*Ammodramus savannarum australis.* One was collected near Elfers, Pasco County, March 26, 1926. Saw others.

*Sharp-tailed Sparrow — *Passerherbulus caudacutus.* Common winter resident in short-grass tide marshes, from Tampa Bay northward. Left about April 15, 1926. Out of ten collected in 1925-26, only two were adults.

*Scott's Seaside Sparrow—*Passerherbulus maritimus peninsulæ.* A few in salt marshes west of Elfers. Collected one April 5, 1926, and on May 13 saw five in same marsh where they seemed to be nesting, although Scott says "Common from December to February, does not breed here."

Chipping Sparrow—*Spizella p. passerina.* Occasional winter visitor. Near Clearwater and Tarpon Springs flocks of fifteen and fifty, February 23 and March 5.

Field Sparrow — *Spizella p. pusilla.* Occasional winter visitor. (February 23, 1926).

*Pine Woods Sparrow—*Peucaea a. aestivalis.* Fairly common resident in certain open pine tracts where it is found usually in saw-palmettos along borders of swamps. Breeds. Very hard to flush.

*Bachman's Sparrow—*Peucaea aestivalis bachmani.* Less common than last. Took one and saw several west of St. Petersburg, March 26, 1925. Saw them in same place early in March, 1926. Collected one on the Anclote River plains March 18, 1926. Found no nests.

*Song Sparrow — *Melospiza m. melodia.* Uncommon winter visitor.

*Swamp Sparrow—*Melospiza georgiana.* Common winter resident.

Towhee—*Pipilo e. erythrophthalmus.* Common winter resident.

*White-eyed Towhee—*Pipilo e. alleni.* Common resident; breeds. Locally called Joree; is a fine singer.

*Florida Cardinal—*Cardinalis c. floridanus.* Common resident, nests in May. Well distributed throughout the state.

Indigo Bunting—*Passerina cyanea.* Uncommon migrant.

Painted Bunting—*Passerina ciris.* Mr. A. C. Bent saw one on Long Key in 1925.

Summer Tanager—*Piranga r. rubra.* Summer resident; breeds. Saw a male and female April 25, 1926.

Purple Martin—*Progne s. subis.* Summer resident; breeds. First seen in 1925 on March 24, and in 1926 on February 25. No specimens being taken it is possible the Cuban Martin visits this territory.

Barn Swallow—*Hirundo erythrogastra.* Migrant. First seen in 1926 on April 4, and for a week thereafter; none later. Seen at St. Marks, May 18, 1926.

Tree Swallow — *Iridoprocne bicolor.* Common winter resident; left about April 15, 1926.

Cedar Waxwing—*Bombycilla cedrorum.* Was seen with great flocks of Robins in latter half of January, 1926. Thirty to 100 waxwings seen, but none later.

*Loggerhead Shrike—*Lanius l. ludovicianus.* Common resident; breeds in March.

*Black-whiskered Vireo—*Vireosylva calidris barbatula.* Summer resident. Saw three on Cabbage Key, May 5, 1926.

Mountain Solitary Vireo—*Lanivireo solitarius alticola.* One was seen near Tarpon Springs, March 18, 1926. It was examined carefully with an 8x binocular at twenty feet for several minutes. The large bill and the bright color were very evident; it therefore seems doubtful that this was *L. s. solitarius*, the Blue-headed Vireo.

*White-eyed Vireo—*Vireo g. griseus.* Appears in late March or early April; said to breed in central Florida.

*Black and White Warbler—*Mniotilta varia.* Common winter resident, remaining until May.

*Prothonotary Warbler—*Protonotaria citrea.* Migrant; a little "wave" was observed April 6, 1925.

*Parula Warbler — *Compsothlypis a. americana.* Appeared in early March in 1925-26. Said to breed here. Seldom seen after early May.

Cape May Warbler—*Dendroica tigrina.* One male migrant, April 23, 1926.

Yellow Warbler—*Dendroica a. aestiva.* A few migrants, April 17 to 21, 1926.

Black-throated Blue Warbler—*Dendroica c. caerulescens.* A few male migrants, April 10, 1926.

Myrtle Warbler—*Dendroica c. coronata.* Very common winter resident; left April 3, 1926.

Magnolia Warbler — *Dendroica magnolia.* Occasional migrant. Was seen May 5, 1926.

Black-poll Warbler — *Dendroica striata.* Occasional migrant. Was seen May 7, 1926.

*Yellow-throated Warbler—*Dendroica d. dominica.* In 1924 several were seen January 29 and afterward. None were seen in 1925. In 1926 first were seen February 12. None were seen after March 16, 1926.

*Sycamore Warbler—*Dendroica d. albilora.* One was collected March 11, 1926. Positively identified another, which was close outside my window, on March 16, 1926.

*Pine Warbler—*Dendroica v. vigorsi.* Common resident in pineries; breeds.

*Palm Warbler—*Dendroica p. palmarum.* Most numerous and widely distributed of the warblers that winter in Florida.

Yellow Palm Warbler—*Dendroica p. hypochrysea.* None were identified positively. Scott (*Auk*, VII, page 20, 1890) says: "The examples of this subspecies that I have met with in the vicinity of Tarpon Springs are of rare occurrence, but they regularly appear in small numbers late in March and early in April, remaining but a few days. I have no fall records."

*Prairie Warbler—*Dendroica discolor.* Rather common resident of Florida. Early dates of its appearance in Pinellas County are: March 3, 1924; March 9, 1925; February 2, 1926. It was plentiful in each year after these dates.

Louisiana Water-thrush—*Seiurus motacilla.* Migrant. It was seen May 5, 1926.

*Florida Yellow-throat—*Geothlypis trichas ignota.* Common resident; breeds abundantly.

Hooded Warbler—*Wilsonia citrina.* Migrant; males were seen April 8, 10, 20, 1926.

Redstart—*Setophaga ruticilla.* Migrant; April 18, 19, 1926.

*Mockingbird—*Mimus p. polyglottos.* Probably Florida's most uniformly distributed bird, and perhaps the most numerous resident.

*Catbird—*Dumetella carolinensis.* Common resident; probably breeds.

Brown Thrasher—*Toxostoma rufum.* Not uncommon winter resident.

*Florida Wren—*Thryothorus ludovicianus miamensis.* Common resident; breeds. A clear, loud singer.

Bewick's Wren—*Thryomanes b. bewicki.* Uncommon winter resident.

*House Wren—*Troglodytes a. aedon.* Common winter resident.

*Short-billed Marsh Wren—*Cistothorus stellaris.* Not uncommon winter resident.

*Long-billed Marsh Wren—*Telmatodytes p. palustris.* Occasional in winter.

*Marian's Marsh Wren—*Telmatodytes p. marianae.* Locally common. April 5, 1926, found them abundant in salt marshes, west of Elfers; males had finished molting and were singing vigorously.

*Florida White-breasted Nuthatch—*Sitta c. carolinensis.* Uncommon.

Brown-headed Nuthatch—*Sitta pusilla.* Was seen in 1925 in this territory by Mr. A. C. Bent.

Tufted Titmouse—*Baeolophus bicolor.* Not uncommon resident.

*Carolina Chickadee—*Penthestes c. carolinensis.* Uncommon.

Ruby-crowned Kinglet—*Regulus c. calendula.* Uncommon winter resident.

*Blue-gray Gnatcatcher—*Polioptila c. caerulea.* Not uncommon resident; probably breeds.

Hermit Thrush — *Hylocichla guttata pallasi.* Migrant; not uncommon in spring.

Robin—*Planesticus m. migratorius.* Winter resident; wandering flocks, often of thousands, feed principally on the berries of the palmetto. When they leave a palmetto grove there are few berries left. Their numbers are so great that they make a great rustling in the dry leaves always present on the lower part of these trees. Except these wandering flocks, but few Robins are seen.

*Bluebird — *Sialia s. sialis.* Not uncommon resident; breeds throughout the state. Young birds accompanied by the parents were seen in late April and May, 1926, from Collier to Leon Counties. They prefer the pine woods.

JACKSON, MICHIGAN.

THE WILSON BULLETIN

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EDITORIAL

We are pleased to announce that the first contribution to the Endowment Fund has been made. It is not a large amount, but it makes a beginning. It may be of further interest to know that this particular contribution was a fee to one of our members for a bird lecture. This fact gives us the suggestion that other additions to the fund might be made by others who occasionally give bird talks for which they hesitate to accept compensation. Hereafter it will be proper to accept such compensation and turn the amount into the W. O. C. Endowment Fund. Such contributions are now temporarily deposited by our Treasurer in the Dayton Savings and Trust Company, Dayton, Ohio.

At the coming meeting in Chicago in November, definite arrangements will doubtless be made for the permanent care of the fund. In the meantime contributions may be sent to the Treasurer, or to any member of the Endowment Committee, as named in the last June number of the BULLETIN.

OUR NEXT MEETING

The next meeting of the Wilson Ornithological Club will be held on November 26-27, in Chicago, at the Chicago Academy of Sciences. The Academy is located in Lincoln Park, about eight minutes' ride from the loop district of the city. Our first meeting twelve years ago was held in the same place. The last two meetings at Kansas City and Nashville have been very successful, which gives us good reason to hope that the coming Chicago meeting will be the best one in our history. The Chicago Academy, besides being a comfortable meeting place, offers exhibits of particular interest to the student of birds. The fifty-five habitat groups of native birds will occupy one's attention between sessions. The overhead cases showing many birds in flying attitudes will also be of interest. No visitor should fail to see the Atwood Celestial Sphere in operation.

There will not be another issue of the BULLETIN prior to the meeting, but the Secretary's letter will give details concerning the program, hotel headquarters, etc.

The Inland Bird Banding Association will meet at the same time and place. Plans are being made for the largest attendance in our history.

A bibliography of 111 titles was necessarily omitted from the autobiography of Mr. Burns in this issue.

GENERAL NOTES

Conducted by M. H. Swenk

An European Goldfinch at Ann Arbor, Michigan.—On February 9, 1926, I took an European Goldfinch (*Carduelis carduelis*) at Ann Arbor. My attention was called to it by its peculiar call. Mr. Norman A. Wood of the Museum of Zoology, states that its feet indicate that it was not an escaped cage bird. The specimen is now in the Museum of Zoology, University of Michigan, Ann Arbor, Michigan.—LEONARD W. WING, *Jackson, Mich.*

The Western Meadowlark at Ann Arbor, Michigan.—I took an adult male of the Western Meadowlark (*Sturnella neglecta*) two and a half miles southeast of Ann Arbor, April 13, 1926. The primaries of the right wing were broken off a short distance from the wing. Mr. A. D. Tinker states it had been there for some time before I took it. The Van Tyne brothers inform me that they had heard it during the summer of 1925. The specimen is now in the Museum of Zoology, University of Michigan, Ann Arbor, Michigan.—LEONARD W. WING, *Jackson, Mich.*

A Late Occurrence of the Chimney Swift in Ohio.—On October 31, 1925, I saw a Chimney Swift (*Chaetura pelagica*) at Dayton, Ohio, flying above the snow-covered banks of the Miami River.*—ROBERT CUSHMAN MURPHY, *American Museum of Natural History, New York City.*

The Blue Grosbeak in Lake County, Ohio, in Summer.—On July 15, 1925, I found a male Blue Grosbeak in a small maple within the Painesville city limits, and watched it for a considerable period as it flew from one shade tree to another, singing at short intervals. The song was a low warble and could easily have been mistaken for that of a Purple Finch had the bird not been in sight. At times, though, there was a suggestion of the song of the Rose-breasted Grosbeak. The bird was still in the dapple-breasted plumage of a young male. The date is interesting since most northern records are made in the spring, at migration time, of birds presumably caught in the onrush of the migrating hosts and as a result passing beyond their usual limits.—E. A. DOOLITTLE, *Painesville, Ohio.*

Some Winter Birds of Iowa.—The following notes on birds seen here in the winter might be of interest. Five species were seen within three miles of my home, in Giard, Clayton County, Iowa, as follows:

Marsh Hawk (*Circus hudsonius*).—A straggler, a female, was seen on my place on January 12, 1924.

Red-winged Blackbird (*Agelaius phoeniceus*).—A straggler male was seen in a neighbor's corn-crib, feeding on mill feeds stored there, during a snow storm, on December 31, 1923.

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*This date is later than any last date of departure of this species recorded from the United States in Dr. Oberholser's recent treatment of the migration of the swifts (in *Bird-Lore*, XXVIII, pp. 11-12) except in the case of four records, viz., Pensacola, Florida, November 2, 1919; New Orleans, Louisiana, November 4, 1896; Charleston, South Carolina, November 5, 1913, and Fort Wayne, Indiana, November 13, 1906.—Ed.

Purple Finch (*Carpodacus purpureus*).—A male was observed on January 25 and 26, 1924, feeding on weed seeds, on the banks of Bloody Run near Giard Station, Iowa.

Cedar Waxwing (*Bombycilla cedrorum*).—On January 19, 22 and 27, and on February 10 and 11, these birds came to my yard in flocks of seven to twenty-six birds and were seen to feed upon the frozen apples that still hung in the trees. I was at times able to approach within ten feet of the birds and they were all of the above species.

Winter Wren (*Nannus hiemalis hiemalis*).—On January 21, 1926, I observed a single bird of this species, in brush piles in a hollow that is being cleared. As I am familiar with the Winter Wren as a fall migrant, when they are common in this same place, collecting was unnecessary.—Oscar P. Allert, *McGregor, Iowa.*

The Harris's Sparrow in Lake County, Indiana.—The Harris's Sparrow (*Zonotrichia querula*) is a very rare bird in Indiana, with only one or two records of its having been heretofore observed in this state. On May 17, 1926, I caught a male in a Lyon pull drop trap, along with four White-throated Sparrows (*Zonotrichia leucophrys*). I took it into the house, where we made positive identification, placed band No. 189152 on it, and released it to go on its way, destination unknown.

Butler's Birds of Indiana (1897) has no record of the Harris's Sparrow having been observed in Indiana, but in his hypothetical list, on page 1162, he states it might possibly be found, on account of having been reported in neighboring states. At page 1178 he states that John O. Dunn shot one in some bushes along the road east of Riverdale, Ill., on October 6, 1894. In the general notes in the *Auk*, XXV, p. 82, (1908) it is stated that one was taken by Mr. Wyman on October 13, 1907, at Beach, Lake County, Ill., and that one was observed by Mr. Ruthven Deane in Lincoln Park, Chicago, Ill., on May 11, 1904. Mr. H. L. Stoddard observed two at Miller; three were observed by Mr. Lyon at Waukegan, Ill., and six by Mr. J. P. Lewis at Chicago, Ill. See the *Auk*, XL, p. 412.—Clarence Bretsch, 690 *Broadway, Gary, Ind.*

Peculiar Behavior of a Kingbird at an Orchard Oriole's Nest.—Mrs. H. W. Glossbrenner, Mrs. A. P. Thomas and myself were making observations at the nest of an Orchard Oriole (*Icterus spurius*) in Brown County, Indiana, on June 20, 1926, when we noticed a Kingbird (*Tyrannus tryannus*) in an adjoining tree. Both the male and female Oriole having fed the young in the nest, which was placed in the topmost branches of a tall oak tree, had gone in search of food. In their absence the Kingbird flew directly to a dead branch two feet from the nest, then perched on the side of the nest, and, with wings extended and spread and tail spread to its fullest, made several dips with its head into the nest. It was so well surrounded with leaves that it was not possible to see what the Kingbird did. The Kingbird then flew to a perch three feet away as the female Orchard Oriole came back. She made a dart at the Kingbird, which did not leave, then went to the nest, continuing to scold a little. The male Orchard Oriole then came, struck at the Kingbird, sat on a perch six inches from the Kingbird and between it and the nest for several seconds, then went to the nest. Both Orioles left in a few seconds and the Kingbird repeated its per-

formance at the nest as before. When the Orioles again returned the Kingbird took its position three feet away. While an Oriole was near the nest and the Kingbird still on the perch three feet away, one of the fledglings, a bird perhaps five days old, dropped to the ground beneath the nest. It lived about twenty minutes. It did not appear to have been pecked. It showed no blood or bruises either from the fall or from an attack. The Kingbird left in less than a minute after the bird fell. The Orioles resumed feeding the remainder of the brood. We saw only one Kingbird about and could find no nest of a Kingbird in any neighboring tree.—Samuel Elliott Perkins, III, *Indianapolis, Ind.*

An Appreciation of the Scarlet Tanager.—One morning in the latter part of May I started for a walk in the woods to locate, if possible, some of the late migrants which, though past due here, had not yet been seen. I had scarcely entered the outskirts of the forest when I noticed a twinkling of scarlet among the pale green foliage of an oak tree. Closer investigation showed that it was a Scarlet Tanager (*Piranga erythromelas*). He was at work industriously collecting his breakfast. I observed him carefully, with the aid of field glasses. He examined the leaves and catkins about him very closely, discovering and devouring many slugs, green worms and small caterpillars. After proceeding thus with his meal for about fifteen minutes, he evidently decided to have something different for dessert, so he dropped down onto a wire fence beneath the trees to get a better view, and, watching after the manner of a flycatcher, he darted forth into the air a number of times, each time snapping up some delicacy and then returning to the fence. A few times also he dropped to the ground, like a Bluebird, picking up some luckless bug or worm on each trip.

When his meal was finished, he flew back up into the tree, calling several times "*chip-errrr*," with much emphasis. Next he entertained me with a concert of remarkably beautiful song. His song resembles that of the more common Rose-breasted Grosbeak very much, but is not quite so hasty, and, while the Scarlet Tanager is a brother to the Rose-breasted Grosbeak in song, he is a Scotch brother, for he has a quaint burr in his throat.

Any person who could thus observe this most gorgeously arrayed of all our many beautiful summer residents, without feelings of admiration and delight, would certainly have to have a head of clay and a heart of stone.—E. D. Nauman, *Sigourney, Iowa.*

Bird Roosts in East Central Ohio.—Near our home in Tuscarawas County are several breeding colonies of Red-winged Blackbirds and Bronzed Grackles. When the young are able to leave the nest the Red-wings have a common roost in a sedgy marsh, while the grackles have a roost in a thicket near the river. In the fall, after the summer dispersion, they seem to coalesce more readily. This coalescence is yet more noticeable in the spring migration, when several thousand birds of the different species have a common roost in some tangled thicket, and sometimes spend two or three weeks of the early spring there. They mobilize at the roost in the evening, and if the weather is fine, will spend some time in mass evolutions. In migration they move in large divisions, in mass formation. In the early morning, when they begin to move to their feeding grounds, they go in the smaller colony (?) groups. We have never noted them feeding in mass divisions except in mid-summer, when the young birds have gained

sufficient wing power to mobilize with the old birds in mass evolutions, and before the summer molt.

The Crows seem to preserve the family group until late summer, when they begin to mobilize at a common roost. Several of these roosts, varying in number of birds from five hundred to several thousand, we have had under observation in both fall and spring. A short time before the sun sets they mobilize enmasse for an evening vesper, though the music is not edifying to "uncultured" ears. At day break they begin to leave the roost for their feeding grounds in the surrounding country. They never move in a mass, but in neighborhood (?) groups of from twenty-five to one hundred.

We visited one Crow roost near our farm home on several moonlight nights. With a large wolf skin robe thrown over our head for a disguise, we could traverse the thicket without much disturbance to the birds. Many never awakened, but kept their heads tucked under the scapulars. There was no crowding, but each bird seemed to have a perch to himself. Numbers were so near the ground we could reach them, and it was amusing to see the awakened ones craning their necks in trying to see what manner of beast was trespassing on their private domains.

The juvenile Robins of a neighborhood usually have a common roost in some convenient thicket or sedgy tract, but we have never found them mobilizing in central Ohio in much greater numbers than the local population. Later in the fall we find large divisions of migrants moving in a mass, but their stay is short and there is not much time to note their movements. They winter in small numbers in sheltered places, and we have one record of a winter roost where thousands of birds spent the winter of 1911-12. We give two quotations from our notes of that time. "January 9, 1912. About an hour before sunset they (the Robins) commenced to come in from the hills west of the valley in companies of one to two hundred and continued until almost dark. They were flying low down and seemed bewildered by the biting wind that was blowing a stiff breeze from the W. NW." The temperature was below zero. "January 10, 1912. Took a trip this afternoon about two miles back in the hills and found them feeding on wild grapes, dogwood and gum drupes. This evening twelve flocks passed over to the east, each flock containing from sixty-five to two hundred birds."

This roost was twelve miles east of our home, in Harrison County. These groups continued to come almost daily to our neighborhood until March, and on the warm days of March seemed to be selecting mates, as there was much trouble among the males as they worked the fields and woods in search of food. In the spring migration we have a better opportunity to study their movements because their stay is much lengthened. They sometimes come in large mass divisions but these soon break up into smaller units—neighborhood groups(?)—to work the woods and fields. They do not have a common roost. The small units usually spend the night on the ground, in grassy meadows and pasture fields, and to some extent they roost in the fields in the fall. The local birds are nesting before these groups all leave us. Sometimes we find them in late April. Are they waiting for summer up in the Hudsonian Zone where these groups belong? Would it be "too curious" to think of this vast mobilized army of migrants, as its divisions near the front, having its group units spread out to

some particular section, with which they are familiar because at one time they were nestlings there?—CHARLES R. WALLACE, *Delaware, Ohio.*

The Red-headed Woodpecker Occasionally Wintering in Alabama.—The Red-headed Woodpecker (*Melanerpes erythrocephalus*) is a summer resident in the vicinity of Auburn, Alabama, but also every winter a few of these birds are to be found with us. Their habit of retiring to the heavily timbered swamps explains why this species is not so often noticed during the winter months. The easily distinguished, whining "*charr,*" uttered while on the wing, during migration, on the so-called "moonlight nights of September," has been noted by the southern observer since the days of the early settlers. This is the only note to be heard as the bird passes over at an altitude of about one hundred yards. At about two minute intervals the note is repeated.

The "late hatches" of the breeding season usually constitute the few that remain with us during the winter. But, before the bulk of the species has returned in April, the winter moult has already taken away the grayish feathers from the head of the young and they are dressed like the mature birds. This winter there was one pair of old birds and one young one left on the college campus at Auburn. During the early fall they were busily storing away the insect-infested fruit of the oaks and pecans, which offered an abundant supply. In winter, when food becomes scarce, the redhead returns for the insect larvae that have been kept in this manner. The pecan weevil, which causes a great deal of damage to the southern pecan crop, is largely controlled by this and its closely related species, the "Speckled Red-head" or Red-bellied Woodpecker (*Centurus carolinus*).

It is in winter that the Red-headed Woodpecker is most quarrelsome, uttering its "clattering" series of notes, which resemble the noise of so many strokes of a mowing machine knife while cutting. On warm clear days in February the well known whining "*charr*" is again heard, along with its numerous other notes which are characteristic of the breeding season, and its habit of "drumming" with its bill on hard surfaces of trees and roofs of buildings. The Red-headed Woodpecker, like the Red-bellied Woodpecker, always builds its nest in dead wood, using no nesting material other than the chips obtained from the making of the nest.

The redhead is very fond of insects. It delights in catching cicadas and grasshoppers, along with many other kinds of insects. Orchards are often attacked by these birds, which is one of its bad habits. But this can be overcome by supplying them with mulberry fruit (*Morus nigra, Morus rubra* or *Morus albo*), as the redhead prefers this fruit to any other. One or two trees will be sufficient to attract them from over an area of one square mile. Not only will mulberry trees attract the redhead, but they will tend to greatly increase the bird population in general in the immediate vicinity, as these trees ripen their fruit over the entire breeding season (May 1 to August 10).—T. R. ADKINS, *Auburn, Ala.*

BIRD BANDING NEWS

Conducted by W. I. Lyon

SUMMARY OF TRAPPING AND BANDING OPERATIONS IN NORTHERN MICHIGAN

BY M. J. MAGEE

In the fall of 1915 I began putting out food for the birds. At first I was a little discouraged, for I seemed to be able to attract nothing but English Sparrows. However, I made war on the sparrows, and on February 17, 1916, a male and two female Evening Grosbeaks came in to feed. More and more kept coming until there were more than fifty feeding daily.

On April 6 of the same year the first Purple Finches came in. Since that time I have kept food out winter and summer; and it is very seldom that we sit down to a meal by daylight without the presence of wild birds at the feeding tray by the dining-room window or at the feeding booths on the nearby trees.

In 1917 I built a bird bath, which, in season, attracts many birds not interested in the seed foods. In 1921 I began, in a small way, to operate an ordinary sparrow trap. The next year I added a so-called bander's trap and enlarged the openings in the sparrow trap, because I found that it was almost impossible to get some of the birds, particularly the Purple Finch, to go through the small opening into the back of the trap. I also used one drop trap, which was used most of the time over a part of the bird bath.

Since that time I have tried almost every kind of a trap, and have finally settled down to the operation of six traps: these are, a Lyon sparrow trap, a sparrow trap with enlarged openings, two drop traps, an automatic trap, and a large drop trap over the bird bath. The last-named trap is 5x3 feet 6 inches on the ground, and eighteen inches high, with two doors on each side and four on top, thus making it possible to get into either side or any part of the top. The last two traps are of my own design.

This year I have enclosed my station with a cat-proof fence. The space enclosed extends from the back of my house to the back of my neighbor's house; and from the fronts of the houses to the front walk, giving me an area 75x175 feet, about one-quarter of which is covered with grass, a few shrubs and trees, while the rest of the area includes some trees and a thicket, left in a wild state.

I always cover my traps with pieces of blanket. It keeps the birds quiet, and they will go into the gathering cage as soon as the door is opened and a corner of the blanket is lifted. I also cover the gathering cage while carrying the birds around. Since doing this I have had little trouble with the birds injuring themselves by striking against the wires or poking the bill through the meshes.

I would have banded many more birds in 1922, but twice in the spring, and once in the fall, I was entirely out of bands; these were times when the Biological Survey was encountering difficulty in having the bands manufactured. Except less than a dozen birds, banded in 1921 and 1922, all my banding has been done within fifty feet of my dining-room window. Since 1922 I have not banded a fledgling, even when the birds are nesting right at the house. I find that I can get them in the traps as soon as they are able to get around, and then there is less danger of injuring the young birds.

One who is just beginning his banding work can scarcely realize how interesting it becomes as the years go by and the returns keep coming in. I remember very well the thrill I experienced when my first return came in on April 22, 1923; it was a Purple Finch (No. 30622) that I banded on July 11, 1922. This bird was back in 1924, but I have not seen it since. My second return was also a Purple Finch (No. 103609), an adult male when banded on July 28, 1922. This bird has been back every year since, and has repeated from one to eight times each year. As it was in adult male plumage when trapped in 1922 it must have been at least two years old at that time, and must now be at least six years old, it is as highly colored an old male as I have ever seen.

The first Song Sparrow to be trapped this year, 1926, was No. 61117; it was an adult bird when I banded it April 29, 1923, and has been back every year since. The first Robin was No. 269808, a young bird when banded July 13, 1924, and not trapped in 1925. On May 16 I trapped my first Chipping Sparrows for the year, three of them: one was an adult bird (No. 1558A) when banded June 5, 1924, and back in 1925. This year I also got my first return on a White-throated Sparrow, No. 164961, an adult bird when banded September 17, 1925.

On October 21, 1923, after returning from a walk with Dr. Christofferson, who has been scouting this territory with me and checking our birds both winter and summer since 1915, I set my traps and we went in to lunch. A few minutes later on looking out of the window, much to my surprise, I saw a female Scarlet Tanager in my automatic trap; a male tanager, showing some red patches, was on the ground just outside the trap. I believe this is a record late date for a Scarlet Tanager in anything like this latitude, 46° 30′ North. A No. 119917 band was attached to the female, which was then held in my hand while the Doctor photographed it—this to forestall any question or argument as to the identification of the bird. This year, 1926, a full-plumaged male Scarlet Tanager came in to feed on May 20; it was feeding on the ground, in and out of my feeding boxes, or under the drop traps every day until May 29. On the 21st I banded it with No. 190588.

Some years ago White-crowned Sparrows were feeding in my window box off and on for a week or more. I noticed a bird among them that looked different: the head markings were distinctive, the outer black stripe reached from eye to eye, and the space in front of the eye was white instead of black. None of the other birds showed this solid black line. I looked through the bird books for any description or picture that would help to identify this color pattern, and finally decided that the bird was a Gambel's Sparrow (*Zonotrichia leucophrys gambeli*). But, not being sure, I did not report it. Since that time I have been on the lookout for another bird showing the same head markings. Last year, on May 21, 1925, I trapped one and banded it as a Gambel's Sparrow, No. 160668. In making the report to the Biological Survey I enclosed a sketch of the head. At the same time I sent a similar sketch to Norman A. Wood, of the University Museum of Zoology, Ann Arbor, Michigan. Under date of June 9, 1925, Mr. Wood wrote me as follows:

"Let me congratulate you on the new Michigan species. From your description and sketch I am quite sure you had a Gambel's Sparrow. I have examined ours in the Museum collection and find the grayish white lores, and the longer black line from eye to eye."

In Professor Barrows' Michigan Bird Life the Gambel's Sparrow is not mentioned, even as a possibility for Michigan. Considerable regret was expressed in several quarters that I had not collected the bird. However, I would rather look for a return of the bird alive than make a record with it dead. If I ever get another I shall photograph it as I did the female Scarlet Tanager.

Three of my birds have thus far been reported to Washington.

Purple Finch No. 118680, banded September 4, 1923, was found dead at a farm house three and a half miles from Sparta, Tennessee, on May 1, 1924. This bird had probably been farther south and was now on its way north, as I started banding Purple Finches in 1924 on April 21.

Purple Finch No. 160959, banded June 30, 1925, was reported killed on February 14, 1926, near Smackover, Arkansas. Smackover is in south-central Arkansas, not far from the Louisiana line, and about one thousand miles west of south from my banding station. I wrote to the party who made the report, and was told that Purple Finches wintered there in flocks ranging from one to two hundred in number. On May 20, 1926, I trapped Purple Finch No. 160960, which had also been banded on June 30, 1925. Of finches banded from June 27 to July 2, 1925, I have had twenty-one returns, the one just mentioned and Numbers 160901-3-5-9-16-18-21-24-25-26-29-30-32-45-48-49-54-70-98-99. It is possible that all of these birds may have been in the flock that wintered in southern Arkansas.

Evening Grosbeak No. 110630, banded on March 23, 1924, was reported by Deputy Minister L. K. Richard, of the Department of Colonization, Mines and Fisheries, Province of Quebec, as having been killed near Quebec. I wrote Mr. Richard and he replied, "Bird was killed at St. Charles, County of Bellechasse, some twenty-five miles east of Quebec on March 9, 1926." This place is some six hundred and fifty miles east of where the bird was banded. Dr. Christofferson and I have suspected for some years that there was more of an east and west movement of our Evening Grosbeaks than north and south. This report from Quebec strengthens our suspicion.

Some of my notes on the plumage of the Purple Finch were published in the *Auk* for October, 1924. Reprints were supplied to the U. S. Biological Survey for distribution to bird banders at that time.*

In these notes I stated that the notes on plumage should be considered only as preliminary. With one slight correction and two additions that report now stands as published.

Correction. Adult male—"Most, if not all, do not acquire the crimson plumage until two years old"; this should read, "The crimson plumage is not acquired until the bird is at least a year old, and in many not until at least two years old." Many young males trapped in the spring acquire the adult plumage by fall. So many of them, that some must be young of the previous year, but certainly all are not. Purple Finch No. 58864 was banded on May 12, 1923, as a young male or female; it had molted and repeated on September 4. At this time it showed no crimson color and I marked it as probably a female. It returned on May 7, 1925, in adult male plumage. This bird could not have been younger than a 1922 bird, and did not acquire the adult male plumage until 1924,

*I still have on hand a small supply of these reprints, and will be glad to send one to anyone upon request.

when it was at least two years old. This is only one of many returns I have to prove my point.

First Supplement. Some young males or females show a reddish-brown edging to the tail feathers, and now and then to the primary wing feathers as well. These may be young males, but certainly all young males do not show this edging. Of the many young males or females banded last fall (1925) very few, less than a dozen, showed any reddish-brown edging whatever, although a good many showed an edging varying from greenish-olive to yellowish-olive. This spring I had only five or six showing any reddish-brown edging, and none showing any distinct olive edging. This edging is probably lost by fading or wear.

Purple Finch No. 160720 was banded on May 24, 1925, as a young male or female. On July 31 it was molting. On September 4 it had tan on the chin with a slight reddish tinge, and broad markings of brownish-buff on the throat, breast, sides, and flanks. Some feathers on the upper breast were faintly tinged with reddish. There was a little red on the head. The rump was yellowish-brown. The tail and primary feathers were edged with reddish-brown. When this bird returned on May 7, 1926, it had a little red on the head, throat, back, and wings. There was no reddish-brown edging on the tail or primary feathers.

Second Supplement. A reddish feather or two does not necessarily mean that the bird is a young male. On September 21, 1923, I banded Purple Finch No. 118862, and recorded that it "looks like a female but might be a young male." When it returned on May 25, 1924, it showed a tinge of yellowish on the rump. It repeated again on May 10, 1925, and I marked it as a young male, for it showed a few feathers tinged with reddish. On June 25 it was found dead about two miles from my trapping station, and taken to Dr. Christofferson. A few feathers on the chin and two or three on each side of the throat had a faint reddish tinge. On examination the bird proved to be a female. The skin was mounted for our High School museum, and the body was placed in alcohol.

Purple Finch No. 76165 was banded May 27, 1923, as a young male, on account of a few feathers on the rump and throat being tinged reddish; it returned April 19, 1925, with a few feathers on the head, back, rump, throat, and breast with a slight reddish tinge. The whole bird was rather light in color and distinctly yellowish-olive. If this bird was a male it passed at least two molts without acquiring the adult male plumage.

Purple Finch No. 116708 was banded July 25, 1923, and returned May 12, 1926, showing a little reddish tan on the chin, throat, and breast; also a few reddish feathers on the top and sides of the head. The rump showed a little dark yellowish-brown. If this bird was a male it passed at least three molts without acquiring the adult male plumage. I suspect that both birds were females.

Following is a complete record of my banding, returns, and repeats to June 30, 1926, inclusive.

TABLE 1. A tabular summary of operations.

	1921	1922	1923	1924	1925	1st Half 1926	Total
Birds banded	21	344	1297	1374	2049	891	5976
Purple Finches only	9	254	1092	1043	1510	697	4605
Returns			34	101	144	180	459
Purple Finch returns			33	91	133	166	423
Repeats		162	850	1150	1894	891	4955
Total handlings to June 30, 1926, inc.							11390

Of birds banded in 1922 I have had 41 back; one Song Sparrow and 40 Purple Finches. Of the birds banded in 1923 I have had 115 back; four Song Sparrows, five Evening Grosbeaks, five Robins, one Chipping Sparrow, 100 Purple Finches. Of the birds banded in 1924 I have had 115 back; one Song Sparrow, four Evening Grosbeaks, one Robin, one Goldfinch, one Chipping Sparrow, two Lincoln's Sparrows, 105 Purple Finches. Of the birds banded in 1925 I have had 114 back; three Song Sparrows, one Evening Grosbeak, one Robin, one White-throated Sparrow, 108 Purple Finches.

For plumage records repeats are important. I have been able to check many of my banded Purple Finches all through the molting season into the fall plumage.

The average life of our small birds must be very short. They suffer many casualties, and the mortality must be very great, even among those not migrating south of the United States. A check-up of my Purple Finch returns seems to indicate this very plainly.

TABLE 2. To show decrease in number of returns.

	Number banded	Number of returns			
		1923	1924	1925	1926 half year
1922	254	33	19	5	3
1923	1092		72	40	17
1924	1043			88	38
1925	1510				108

The successive decreases may, at least in part, indicate the mortality. My records would also seem to indicate that the average life of the male Purple Finches is longer than that of the females. Since starting to do banding up to December 31, 1925, I have banded 3,908 Purple Finches, of which 673 were in adult male plumage. Three hundred fifty-three of these have returned, of which 82 were in adult male plumage when banded. This makes the returns from all nine per cent, and from adult males alone twelve per cent. During the same time birds banded as young males or females that on last return were in adult male plumage total 135. Add these to the 82 banded in adult male plumage and we have 217 definitely known to be males out of 353; or 61.33 per cent of all returns have been males, and only 38.66 per cent have been females, with certainly some young males included. A similar result is obtained from a study of the returns for the first half of the year 1926, as may be seen from the following table.

TABLE 3. Sex of Purple Finch returns for first six months of 1926.

Of	3 returns banded in 1922,	3	are in adult male plumage
Of	17 returns banded in 1923,	9	are in adult male plumage
Of	38 returns banded in 1924,	28	are in adult male plumage
Of	108 returns banded in 1925,	74	are in adult male plumage
	166	114	

From these figures we find that out of the 166 returns during this six months period, 114, or 68.66 per cent, were positively known to be males.

TABLE 4. Distribution of all Purple Finch returns as to sex.

Year Banded	In adult male plumage when banded	Banded as young male or female. In adult male plumage on last return	Banded as young male or female. No change in plumage on any return.	Total
1922	11	10	19	40
1923	32	29	39	100
1924	20	41	44	105
1925	19	55	34	108
	82	135	136	353

To anyone about to start to feed or band birds I would say, if you keep a cat and are not willing to give it up, don't start. The house cat, and that means your cats and all your neighbors' cats, is the most destructive agency to bird life that we have in the towns. With me it has been a constant war on cats and English Sparrows. In 1924 and early in 1925 I know that cats got a number of my birds. I always kept a gun handy and shot any cat on sight, but I felt that I was not getting results; so I wrote to the U. S. Biological Survey and they sent me a reprint from the Yearbook of the Department of Agriculture, for 1919, entitled "Trapping on the Farm." This reprint describes a cat trap, and how to make it. I had one made, and it works. My neighbors, voluntarily or involuntarily, have stopped keeping cats.

TABLE 5. A record of cat and sparrow control.

	1921	1922	1923	1924	1925	6 mo. 1926	Total
English Sparrows destroyed	132	257	588	187	411	58	1633
Cats destroyed	1	2	7	4	22	25	61

SAULT STE. MARIE, MICHIGAN.

AN EXONERATION OF THE PURPLE FINCH

BY M. J. MAGEE

Is the Purple Finch (*Carpodacus purpureus*) entitled to its reputation? It is reported as "of doubtful utility", "the most confirmed bud-eater of all our birds", etc. Since 1916 I have had them feeding by the hundreds in my yard, from early spring until late in the fall.

On my lot there are a few apple trees, at least thirty-five years old; they have never been sprayed nor had any attention. In the *Auk* for October, 1924, I published some notes on the Purple Finch. Here I stated that "Last year more of the birds were here than ever before, and my trees never had more or better apples, hardly a wormy one in the lot. I doubt if their budding does any harm, certainly not to apples in any event."

In 1925 I made some photographs showing these apple trees in different stages of fruiting. Figures 1 and 2 show the same tree, which stands about

fifty feet back of the house, and about seventy-five feet from the bird bath. Figure 1 shows the tree in blossom. Figure 2 shows the tree propped up to keep the weight of the apples from breaking the limbs. Eleven and a half bushels of apples were gathered from this tree. Figure 3 shows about half of an apple tree, at my bird bath, just before the apples were picked. In a storm four

FIGURE 1. Apple tree in blossom, frequented by large numbers of Purple Finches.

years before this tree was split in two, and the back half of it is now gone; but it still bears fruit, and in 1925 yielded four and a half bushels.

All these apples were looked over carefully, and only about three wormy ones were found.

So, from these facts, I am convinced that the Purple Finches do no appreciable harm to the apple crop, even though they may be guilty of eating some of the buds in the springtime. On the other hand the fruit was abundant and unusually free from worms, while the birds, especially Purple Finches, were unusually abundant in the trees in the blossoming season. What connection there may be between these last facts we may only surmise, but it does not seem probable that we could reach a conclusion to the disadvantage of the birds. In 1925 I banded forty-nine warblers, of twelve species, and all but three or four were taken in the trap over my bird bath, shown in Figure 3.

SAULT STE. MARIE, MICHIGAN.

FIGURE 2. Same tree heavily loaded with fruit, and propped to prevent breaking of limbs.

FIGURE 3. Bird bath trap located under an apple tree which bore 4½ bushels of fruit.

NOTES ON THE EVENING GROSBEAK

BY M. J. MAGEE

Since beginning my feeding of wild birds in 1915 I have had a flock of Evening Grosbeaks (*Hesperiphona vespertina*) here every winter except one, and several times a few have been here during the summer, the latter on three or four occasions being accompanied by young birds still fed by the parents. In 1923 I banded 59 of these birds; in 1924, 138; in 1925, 205; and 82 during the first half of 1926. During midwinter I do very little banding, because the snow is deep, and the grosbeaks have to be handled very carefully or they may injure each other. Every month in the year, for seven years, Dr. Christofferson, my associate in bird work, and myself have checked the Evening Grosbeak in the eastern part of the upper peninsula of Michigan. So in the future it will have to be put down as a regular resident of this locality, and not as an irregular winter visitor merely.

We have not yet been fortunate enough to locate any nests, so cannot say whether the males can be distinguished from the females before the young leave the nest. They can certainly be separated soon after. At the feeding station on August 18, 1924, a very young grosbeak was being fed pin cherries by the female parent. The young was fawn color, with wings and tail as in the adult female, except that the largest white patch on the wing was quite yellow.

On September 8, 1924, the feeding station was visited by one female grosbeak with one young, and by another with three. In general the color of the young was fawn, but somewhat darker than in the young of August 18. One of the young had the wing and tail markings of the female; the others had the large white wing patch of the males with a decidedly yellow tinge to the feathers of the breast and middle back, and tails like females. Bills of all were dusky, and considerably darker than the bills of females. The two old females were feeding the young with sunflower seeds, with an occasional pin cherry. Up to September 12 nine young visited the feeding station; one female with three young, two with two young each, and two with one each. On September 11 I trapped a young female. This bird was more mature than the young first seen on September 8, and was able to feed itself, though fed now and then by the old female. Its plumage was much like an adult female, but there was more fawn color about the head, the bill was darker, and the largest white patch on each wing was tinged with yellow. The feathers were quite downy, especially on the head. The throat was the same color as the sides of the head and upper breast, and bordered on each side by a distinct blackish line.

On October 18, 1921, I saw a young male with black and white on the wings, and yellow above the bill and eyes, as in the adult male; the body and tail were like the adult female. Of the many males I have had at the feeding station since 1915 this is the only young male I have thus far seen in changing plumage. And, judging from this one specimen we might conclude that the young males change very quickly into the adult plumage. The tail is the last to change, but by midwinter one seldom finds a male showing any conspicuous white on the tail; however, the presence of a little gray-white on some of the tail feathers does not necessarily indicate a young male. Grosbeak No. 110646 was banded on April 7, 1924, and when trapped on April 5, 1926, it had a gray-white patch on the inner web at the tip of each outer tail feather.

Although the birds rapidly change into the adult plumage, I believe, in most cases, the young birds can be distinguished from the old ones in late fall and early winter, and a few even in the following spring. The young males are more of a lemon yellow, and are much less bronzed than the older males. I am sure that the very heavily bronzed birds are old males, and the lightly bronzed birds are young males. Between the two extremes will be found an infinite variety of shadings.

The young females do not have the whitish throat; it is the same color as the sides of the head and upper breast. This gradually becomes lighter until the gray-white throat of the adult female is attained. In almost all cases the dark lines at the sides of the throat are present. Out of the thirty-eight females banded from November 11 to December 31, 1925, sixteen had the throat of the same solor as the sides of the head and upper breast, although in some cases by ruffling up the feathers it could be seen that they were becoming lighter. All showed the dark lines at the sides of the throat except No. 331327, which was banded on November 22. On the latter's card at that time I noted that the "dark side markings are very indistinct."

The amount of white on the wings varies much in the females, hardly any two having exactly the same markings. I believe that those showing the least white are the young females. These young also show less of a yellow tinge on the feathers of the nape, back, and breast. I have never seen a female heavily tinged with yellow that did not have more than the average amount of white on the wings.

There is one correction that should be made in the usual description of the plumage of the Evening Grosbeak. After molting, the feathers in the white wing patches of both males and females are distinctly edged with yellow. All of the descriptions of the plumage that I have seen, from Audubon down, are very much as given by Professor Barrows in "Michigan Bird Life", in which for the male it is said, "most of the secondaries and their coverts snowy white"; and of the female, "primaries and secondaries black, boldly spotted with white." This limited description may be due to the fact that only specimens taken in the spring were examined. Practically all of my banding of these grosbeaks has been done in the spring, until last fall (1925); and then from November 11 to March 1 I banded eighty-four, forty males and forty-four females. The males had nearly all of the feathers in the white wing patch edged with yellow on the outer webs, except at the tips. This was true for the great majority of females as well; a few showed little, if any, yellow edging to the white markings on the primaries.

Either from wear or fading the yellow edging lightens; in the males, first on the white secondaries; in the females, on the white patches of the primaries. This fading of the yellow edging has been particularly noticeable since the first of March. I have banded several males showing no distinguishable yellow on the white secondaries, and a number of females showing none on the primary white patches. Sometimes the edging is very indistinct and can only be detected by getting the bird in a perfect light. On damp days the yellow edging is more noticeable than on dry days. Two males (No. 393387 and No. 393411) and four females (Nos. 393405, 393407, 393412, and 393413), all banded between April

4 and 10, showed no distinguishable yellow edging on any of the white wing feathers.

In addition to the variations in plumage already mentioned there are some in the plumage of the male which I believe are entirely accidental. The upper tail coverts are usually solid black, but quite a few have the two longest feathers tipped or dotted with yellow, and now and then the four longest feathers are so marked. In a few cases the markings are white, which I think can be accounted for through fading or wear. The yellow under tail coverts are black on the bases, and sometimes black patches show on the yellow portion of some of the feathers—in one case the under tail coverts were nearly half jet black.

During the winter of 1925-26 a number of my banded grosbeaks were seen at Hulbert, some forty-five miles west of the Soo; and under date of April 9, 1926, I received the following notice from the Bureau of Biological Survey: "Evening Grosbeak No. 110630, banded by you March 23, 1924, was killed at Quebec, Canada. Reported March 13, 1926."

Sault Ste. Marie, Michigan.

SPECIAL STUDIES OF MOURNING DOVES BY THE BIRD BANDING METHOD

BY WILLIAM BREWSTER TABER, JR.

The bird banding method has opened an enormous field of investigation which could not be carried on in any other way. It is a key that will unlock many an otherwise unsolvable problem. Indeed the trapping and handling of living birds brings to light phenomena to be explained which we did not even know existed. Although many of these investigations will not assist in clarifying our main problem, the mystery of migration, they will uncover new facts which will add materially to our present knowledge of bird life.

The last directory of bird banders, published by the U. S. Bureau of Biological Survey, lists under each person's name the special studies in which he is interested. It enables us to communicate with others doing similar research and in that way obtain helpful ideas. If we put aside our personal ambitions to obtain the honor of being the first to publish some new fact, and if we direct all of our efforts to discovering the truth, helping others engaged in the same search as much as we can and giving freely the information that we possess, our progress will be more rapid and the extent of our studies will be greatly increased.

It has been my good fortune to accidentally possess, on my farm, the means of attracting considerable numbers of Mourning Doves. Strange as it may seem this magnet is nothing else but a natural gas well. The well is old and the casing has rotted allowing the salt water, which is so frequently associated with the gas sand, to penetrate to the pocket at the bottom. When sufficient water accumulates it has been necessary to open a valve at the top of the well and allow gas and salt water to blow out, drenching the surrounding ground. This has been done periodically for the past few years, resulting in the saturation of the earth with salt and killing the vegetation. Like their relatives, the domestic pigeon, Mourning Doves are very fond of salt, so this salt peck has proved a strong attraction. Migrants and summer residents alike fly to it. It is not an

unusual sight to see several doves at once about the well busily pecking at the ground and perhaps a dozen or more perched on the top wire of the nearby fence. To begin with I used only a house trap located near the well and baited with whole grains of wheat and corn, but later added a slightly modified clover leaf trap situated within a few feet of the first. Of these two the clover leaf trap catches more doves, deriving its advantage from its three openings instead of only one, and its all wire construction.

In my location, central Illinois, the Mourning Dove trapping season opens the last few days of March, and soon after the first catches I find one or two of the earliest nests in the orchard. Many of the doves must arrive already mated. When two birds are caught together they are usually of opposite sex and when released usually fly away in company. During the month of April, 1924, forty doves were caught. Five catches were of two birds each, and in all of these cases they were paired off male and female. During April, 1925, thirty doves were caught. Three catches were of two each and in each case they also were male and female.

About the first of May successful nest locations have been secured and the doves are busy incubating their eggs. Instead of catching birds of either sex at any time of day it becomes evident the two sexes are now not feeding together, but that in the early morning most doves caught are males, in the middle of the day mostly females, and in the late afternoon males again. From May 1 to June 4, 1924, inclusive, a study of this phenomenon was made. Including repeats and returns 114 doves were caught, fifty-three females all but five of which were found in the traps between 8 A. M and 2 P. M., and sixty-one were males all but nineteen of which were found caught either before or after those hours. Therefore the daily incubating period of the males must be from about 8 A. M to about 2 P. M., while the females are on the nests for the remainder of the time. The exceptions may be explained by a number of reasons. Several may be late migrants. Several may be due to nests having been broken up by some marauders and the doves having not yet secured a new location. Also there must be a number of free unattached birds wandering about the countryside, for often when one brooding bird is killed the other secures a new mate astonishingly quickly. Dr. A. A. Allen in the January, 1924, *Auk* illustrates the presence of free unattached birds but considers them to be late young migrants. However, Mourning Dove 314133 (a female) is a wanderer, for it was banded by me on June 6, 1924, and was picked up with a broken wing at Pleasant Plains, Illinois, on June 22, which is approximately 110 miles west and only twenty-five miles north of Greenwood Farm. Clearly this dove was wandering, for this occurred at the height of the nesting season and neither the direction nor the distance would indicate migration.

There seems to be a general belief that, like their congener, the domestic pigeon, Mourning Doves mate for life, but the evidence that I have is most certainly negative, for I have not a single instance of one being caught with its former companion of opposite sex among seventeen such doves which have returned during succeeding years. Of course this evidence is not sufficient to be considered conclusive. However, it may be taken for whatever it is worth.

In the course of my banding operations, I have found that Mourning Doves have suffered from two major diseases. During the latter part of August and

the month of September, 1924, an epidemic of avian diphtheria attacked them. Out of eighty different doves handled during this period, six were affected. Only one bird of another species, a Blue Jay, had contracted it. This epidemic is of considerable interest because it occurred at the height of the dove migration and because during that fall this disease was particularly bad among the poultry of the middle west. However there is no evidence that doves gave the disease to the chickens. Indeed it may have been quite the reverse. The symptoms were yellowish white lesions in the back of the mouth or throat, swellings on the sides of the head, formation of a brownish scab on the edges of the bill, a grayish discharge from the corners of the mouth and nostrils, a general inflammation of the mucous membrane of the mouth and nostrils sometimes resulting in the complete closing of the latter and in severe cases even the sloughing off of portions of the bill. The bill of one immature dove was so badly distorted and deformed that the outer end of the upper bill was crossed to the left and the point turned down over the left side of the lower bill extending a considerable distance below it. Even if this bird recovered it must have been very difficult for it to pick up its food.

The other major disease is the bird foot disease which Mr. Stoddard, who is conducting the quail investigation in Georgia for the Bureau of Biological Survey, has advised me is the same as that which has been discovered by Mr. Baldwin and Mr. Musselman to be so prevalent among the Chipping Sparrows at Thomasville. A large number of doves have been affected by it at some time during their lives. However as far as their feet are concerned it does not seem to cause any serious inconvenience although in some cases nearly the outer half of several of the toes have sloughed off. Missing toe nails and outer portions of the toes indicate that the bird has at some time suffered from it. The symptoms of active cases are shortening of the toe nails, or even loss of nails and ends of toes accompanied by a cyanosis or darkening of the ends of the toes affected, or even dry gangrene at the ends of the toes. A typical severe case was submitted to the Laboratory of Animal Pathology and Hygiene at the University of Illinois for examination, and they reported that the disease was probably ergot poisoning or something very similar to it. Ergotism is caused by eating seed which has been attacked by the fungus *Claviceps purpurea* which is parasitic upon many members of the grass family. As Mourning Doves include various grass seeds in their diet, it is quite possible that it may be ergotism. However that is yet to be proved. Since ergot is an abortifacient as well as a powerful haemostatic it seems likely that if it actually is the cause of the disease its more serious effect would be to interfere with the egg laying function.

In closing, allow me to enter my plea, along with that of Dr. Gross, that more of us make use of the bird banding method for pursuing special studies besides that of migration. There are so many matters to investigate, so many of nature's secrets to disclose, that the efforts of all of us are needed. One investigation leads to another and so the interest never lags. And if we communicate with one another in a spirit of co-operative helpfulness our progress is sure to be rapid.

Kansas, Illinois.

Banding Barred Owls.—On May 9, 1925, Mr. L. Claire Hurlbert and myself set out for a wooded area about a half mile from the city of East Lansing prepared to take movies and still pictures of a Barred Owl (*Strix varia varia*) brood which had been under observation for some time. The nest was in a deep shagbark hickory stub about thirty feet high, whose top had been removed by the wind. The cavity made a securely hidden retreat for the three inmates who were about to leave the nest.

Aided by telephone climbers, I was able, finally, to stand upright on a limb, cling to the main trunk with one arm and reach into the nest with the other. By this time the parents were aware that we were intruding and came nearer the nest. Apparently the female was either the braver or the more concerned for she came nearer than her mate who seemed content to watch proceedings from a distance. The female perched on a limb less than a hundred feet from me and occasionally gave vent to a series of low calls.

As the third young bird was being transferred from the nest to the basket in which I intended to lower them to the ground for a sitting, Mr. Hurlbert began to hurriedly adjust the motion picture camera. When the female swooped down within a few inches of my shoulder, I realized what it was about. Whenever I would turn and look at her she would fly farther away and light on a limb as if she did not wish to be too near when under observation. In order to get a picture I deliberately turned my back, took a firm grip on the trunk and began to tease the young until they would utter a shrill squeal. After a few minutes the female swooped down and struck me on the shoulders with both of her feet. Although expected, the first impact was rather a surprise to me, and a new experience. The talons pierced my heavy shirt and underwear and left their marks in my skin. In about three minutes the female struck again and by this time the male seemed to think it must be a safe proposition for he, too, struck me, but with more caution and less damage. After the female had left her marks for the third time, Mr. Hurlbert thought that he must have some good films and I was more than ready to call it enough.

The young were then lowered to the ground, banded with the numbers 301851, 301852, 301853 and photographed. During this interval of about fifteen minutes the parents made no attempt to attack me as I kept them in mind and occasionally looked in their direction.

When returned to the nest, the young refused to stay inside and we finally left them perched on the edges of their former home. During the first week in June, I visited the same woods and observed five Barred Owls which I thought to be two adults and three young. Although I was unable to determine with a field glass whether any wore bands, I liked to think of them as my former acquaintances.—H. D. Ruhl, *East Lansing, Michigan.*

Banding Great Horned Owls.—On April 18, 1926, in company with a friend I took a fifteen mile hike. We followed the railroad track south from Vicksburg, Michigan, until we crossed Big Portage Creek near Portage Lake. There we turned to our right and entered what had been a large tract of timber but now mostly second growth with a few large trees scattered here and there.

My friend, having left his boots at home, remained on the up-land, while I took a stroll through the swamp to see what I could find.

Nearing the creek at the west side of the swamp I flushed a Great Horned

Owl, and while watching him fly away spied a yellowish object sitting in a distant tree which turned out to be a young owl well feathered out but enough of the down left to give it a yellowish appearance. In another tree to the left was another owl somewhat nearer the ground.

Having brought my bird bands along it was my desire to band them, but how to do so was a problem as they were too far away from the main body of the tree and the limbs so small that climbing the tree would be of no use. So I stood there for half an hour watching and wondering. At last an idea struck me. There were lots of tall black alders standing near. I cut two of them and tied them together making a pole about fifteen feet long. I left a crotch at the top end, then I made a loop out of some heavy cord and fastened it into the split ends of the crotch and tied the other end of the cord to the pole. By raising the pole as high as I could reach, I managed to drop the loop over the owl's head. The rest was easy, that is, as far as getting the owl down was concerned.

Now for the banding; first I had the owl and then the owl had me, but after awhile I got hold of both feet with my left hand and placed him on his back, in this position he seemed quite content so long as my right hand did not come in contact with his claws, if it did it was another case of the owl having me.

At last I got a band on and let him go. When I would come toward him he partly spread his wings and would snap his bill at me. After watching him awhile and giving up all hopes of ever banding the other owl, I started back for my partner. I told him of my find and coaxed him to go along back if he thought he could hit the high spots and not lose his footing. It did not take much coaxing so we started, my partner arriving there without a mishap. After watching the actions of the banded owl which we had placed upon a large log, I still had a desire to band the other owl. So sizing up the tallest alder and the distance from the ground to the owl, I decided to make a try.

Cutting two of the tallest alders to be had and tying them together as before, I proceeded. On account of the length of the pole it made a rather limber outfit but after several attempts I finally succeeded in slipping the loop over his head, down he sailed as nice as could be. Having help this time it did not take long to band him, my partner holding him by the feet while I put the band on him. This finished we placed him on the log with the other owl and after watching them awhile, we started to go when off to the left about ten rods, I caught sight of another one perched upon an old stub about seven feet from the ground. I went over and caught this one with my hands and we soon had a band on him. He was a rather quiet bird, not much on the fight, easily handled. The other two were ready for a scrap all the time, they kept their wings extended like an old setting hen when she is protecting her chicks from an enemy, and when our hands came anywhere near they would snap at them and bite them.

The first two banded were much larger and lighter in color than the last one we banded. The largest one had a wing spread of forty-eight inches.

I had fourteen claw marks on my right hand when I got through and all bleeding. Our greatest regret was that we did not bring a camera, as they made a most beautiful sight perched upon that log.

We continued our journey home along the east bank of Little Portage Creek arriving home at 6:00 P. M., having observed fifty-one species of birds on the trip. So taking everything into consideration we had a very enjoyable day.—F. W. Rapp, *Vicksburg, Michigan.*

NOTES HERE AND THERE

Conducted by Gordon Wilson

Dr. William T. Hornaday, director emeritus of the New York Zoological Park, has been presented with a gold medal by the New York Zoological Society for his thirty years of "loyal, able and efficient service."—*Science.*

The editor of this column is now conducting a column in the daily *Times-Journal* of Bowling Green, Kentucky, entitled "Birds and the Out-of-doors."

Mr. William I. Lyon, Waukegan, Illinois, the famous bird-bander, has evolved numerous types of traps for banders and now has out an attractive circular advertising his wares. As I have seen several of his traps, I can vouch for the oddity of many of them, designed to catch odd birds, but his own marvelous records as a bander show how excellent the traps must be.

A recent map issued by The Federation of the Bird Clubs of New England shows the location of ten wild life reservations secured by this organization in the single state of Massachusetts in the year 1925. All except one are on the coast, one being at famous Plymouth Beach; the inland reservation is at Watatic Mountain.

Mr. C. K. Lloyd, Oxford, Ohio, sends the following note to this column: "In the June, 1925, issue of THE WILSON BULLETIN Mr. Bailey has an article on the Scissor-tailed Flycatcher in Florida and states that the records of this bird in Florida are few. On April 4, 1926, my brother and I observed a pair of this species on Anne Maria Island, which borders the Gulf of Mexico. They were on a telephone wire close to a main-traveled road; and they appeared to be very tame. The birds were not collected, but the identification was positive."

We learn from the U. S. Department of Agriculture Press Service that Frank Bond, the well-known bird artist, has been transferred from the Land Office of the Department of the Interior to the Biological Survey. In the new capacity Mr. Bond will be assigned to special work in connection with Upper Mississippi River Wild Life and Fish Refuge.

Henry Hill Collins, 3rd, of Bryn Mawr, Pennsylvania, has devised some field cards of all birds found in the South, in the Middle West, and in New England, arranged for field-trip checking. All birds are arranged in the A. O. U. order and have annotations as to range, abundance, and seasonal distribution. They make good records for field study.

One of the undertakings of The Federation of the Bird Clubs of New England is to save the Heath Hen. There is a special reservation on Martha's Vineyard Island, Massachusetts. Last year the protection increased the numbers of this species.

The Michigan Audubon Society issues a Quarterly News Letter in mimeographed form containing news and notes of interest to the members. One very excellent feature in this little publication is a cartoon or other drawing each issue bearing on bird study.

Our energetic Secretary, like most of us, has more than one iron in the fire. His latest iron, straining the metaphor, is rattlesnakes. During the summer he spent two weeks in western Kansas and Colorado collecting these reptiles. As we feared, he was bitten by one of them after arrival home, and has been laid up for several weeks, but has now fully recovered.

Our former Secretary, Professor Gordon Wilson, has assumed another editorial role—now in the capacity of chief editor of the *Kentucky Folk-Lore and Poetry Magazine*, the first number of which was issued in April, 1926.

Our President, Mr. Ganier, has been a very busy man during the present year. In his office as president of the Tennessee Academy of Science he has taken an important part in the preparation of a "Brief and Argument of the Tennessee Academy of Science as Amicus Curiae" in the John Thomas Scopes case now before the Supreme Court of Tennessee. He is also a member of the City Planning and Zoning Commission of his own city of Nashville. And then, with Dr. Vaughn and Dr. Mayfield, he is developing as a summer home and bird sanctuary a tract of about twenty-five acres on the Stone River Bluffs some twelve miles south of Nashville.

We note that our fellow-member, Dr. George R. Mayfield, of Nashville, has become the editor of the *Journal of the Tennessee Academy of Science*. This *Journal* follows, after a lapse of nine years, the *Transactions*, and apparently is the result of the infusion of new blood. The *Journal* is a quarterly publication, of which the third number has recently been issued.

PROCEEDINGS

Proceedings of the Nebraska Ornithologists' Union

The twenty-seventh annual meeting of the Nebraska Ornithologists' Union was held at Omaha, Friday and Saturday, May 15 and 16, 1926. Twenty-six members were present. The first session was called to order at 2:45 P. M. in the auditorium of the Castle Hotel by the President, Mrs. C. W. McCaskill. President McCaskill and Vice-President Horsky reported for their offices, and M. H. Swenk reported for the office of Secretary-Treasurer. The financial report showed cash on hand, May 1, 1925, to the amount of $147.94, to which had been added during the year $134 from dues, $21.25 from interest on investment, and $4.88 from sale of publications. The expense of the office of Secretary-Treasurer for postage and stationery, including the cost of the Letters of Information, amounted to $38.77, leaving a balance on hand, May 1, 1926, of $269.30. The Secretary-Treasurer also reported that the membership was six honorary members and sixty-five active members, as of May 1, 1926; and seventy-two active members for the current year.

The President then called for the report of the special committee appointed to investigate and report concerning the advisability of having a state bird for Nebraska. This committee consisted of Mrs. Lily R. Button, Chairman, Mr. L. O. Horsky, and Mrs. H. F. Hole. The committee was not prepared to recommend that the N. O. U. should inaugurate and actively further a movement to have the Nebraska Legislature designate a state bird, but it unanimously voted the Western Meadowlark as its choice should at any time in the future a state bird be designated. This report of the committee was approved and adopted.

The Union reaffirmed its previous endorsement of the project of publishing the "Birds of Nebraska", and authorized the Secretary-Treasurer "to prepare the manuscript of the first part and to arrange for the illustrating and printing of the same in such manner as in his judgment was the best, compatible with the resources of the Society." It was also decided that this work, as issued in

parts, would be sold alike to members and non-members, and the Secretary was authorized to ask for advance subscriptions.

The following officers were then elected for the ensuing year: President, Mr. C. K. Hart, Prosser; Vice-President, Miss Susie Callaway, Fairbury; Secretary-Treasurer, Professor M. H. Swenk, Lincoln. It was decided to hold the next meeting at Hastings in May, 1927.

The following public program was then carried out. "History of the Nesting of the Pine Siskin at Wahoo", by Miss Mary St. Martin; "Rewards of Bird Banding", by Misses Agness and Susie Callaway; "Some Interesting Features of the Spring Migration of 1926", by Professor M. H. Swenk.

In the evening ninety-four members and guests sat down at the banquet table in the Castle Hotel. After dinner the retiring President, Mrs. C. W. McCaskill, gave an address on "The Cultural Value of Birds." Dr. H. Gifford also spoke on "The Impressions of a Nature Lover in the Orient." Mr. T. W. McCollough then gave a tribute on behalf of the citizens of Omaha to Dr. Solon R. Towne, the veteran ornithologist who has been a resident of Omaha since 1888. The Secretary announced that Rev. J. M. Bates had been elected to honorary membership. The resolutions included one endorsing the Bird Refuge and Marshland Conservation Bill.

On Saturday, May 15, 1926, the twenty-fourth annual field day of the N. O. U. was held in Fontanelle Forest and at Carter Lake. A total list of ninety-eight species was obtained. On the following day, Sunday, some of the members visited the sites of Fort Cabanne, Fort Lisa, and Engineer Cantonment, and made four additions to the list of the previous day.

Myron H. Swenk, *Secretary-Treasurer, N. O. U.*

Proceedings of the Kentucky Ornithological Society

The third annual spring meeting of the Kentucky Ornithological Society was held at Louisville on April 23, 1926. The afternoon program was devoted to a discussion of bird study in the schools, with Miss Emilie Yunker, School Garden Director for Louisville, in charge. The pupils of the bird club of the Louisville Normal Training School gave a program of interpretative dances, songs, and readings. There was also an exhibit of bird posters and bird boxes made by children of the schools.

At the evening program Mr. J. T. Berry, of Louisville, exhibited about fifty of the original Audubon prints belonging to the Henderson County Historical Society, and spoke interestly on Audubon's life in Kentucky. Professor L. Y. Lancaster, of the Teachers' College, explained method of making plaster of paris casts of bird and animal tracks, and exhibited a collection of such casts. Mr. Charles F. Huhlein, of Louisville, showed a number of slides on rural life which he picked up on his recent trip around the world.

The following officers were re-elected for the ensuing year: President, Prof. Gordon Wilson, Bowling Green; Vice-President, Miss Emilie Yunker, Louisville; Secretary-Treasurer, Mrs. Charles McBride, Louisville. On April 24 the Society held a field day in Cherokee Park, and made a list of thirty-six species of birds. The fall meeting will be held at Henderson, the old home of Audubon. This meeting will have considerable historical interest.

Mrs. Merit O'Neal, *Historian, K. O. S.*

Proceedings of the Iowa Ornithologists' Union

The third annual meeting of the Iowa Ornithologists' Union was held in Atlantic on May 14 and 15, 1926.

The morning of the first day was set aside for registration, during which time friends renewed their acquaintance. About forty members attended the meetings. At 1:30 P. M. Mr. T. H. Whitney, President of the Atlantic Bird Club, gave the address of welcome; the response was made by Mr. A. J. Palas, of Des Moines. Reports of officers were then presented, and committees were appointed.

The first paper on the program was one by Miss Althea R. Sherman, on "Hours spent with the Rails." In the absence of Miss Sherman, the paper was read by the Secretary. Mr. Weir R. Mills, of Pierson, presented a paper describing the wild birds that come to his door-yard; this town lot is trained to grow wild, and is of unusual interest on that account. Mr. Phil Dumont, of Drake University, gave an interesting account of experiences in a marsh near Des Moines. Dr. Weeks presented a critique of Allen's "Birds and Their Attributes." Dr. F. J. Becker, of Atlantic, told how to handle the English Sparrow problem. Rev. George Bennett discussed recent efforts at wild life conservation, and explained Dr. Hornaday's plan for reducing the bag limit on game birds.

The following officers were elected for the ensuing year: President, W. M. Rosen, Ogden; Vice-President, T. C. Stephens, Sioux City; Secretary, Kenneth R. Nelson, Des Moines; Treasurer, A. J. Palas, Des Moines; Executive Committee, Dr. L. T. Weeks, Tabor; Dr. F. J. Becker, Atlantic; Weir R. Mills, Pierson.

A committee was appointed to consider the matter of a state flower. It was also voted to urge the Iowa senators and representatives in Congress to support the bill designed to effect a reduction in the federal bag limit on game birds. It was also voted to hold the next meeting at Des Moines in May. A banquet was held in the evening, following which the Union and its guests listened to an illustrated lecture.

On the following morning at five o'clock the members and friends assembled at Sunnyside Park, and then dispersed in small parties for a few hours field work. A breakfast was served by the Atlantic Bird Club at 7:30, which brought all together again for the final gathering. Comparison of notes showed that a composite list of about eighty-one species had been made. It seemed to be the unanimous opinion that the out-door session is a valuable feature of our annual meeting.

Kenneth R. Nelson, *Secretary, I. O. U.*

ORNITHOLOGICAL LITERATURE

British Birds. By Archibald Thorburn, F. Z. S. Longmans, Green and Co., Ltd. New York and London. 1926. Demy 8vo. Volume III. Per volume $5.50.

The first two volumes of this work were noticed in our last March issue. Volume III is now in circulation. This volume treats of the herons, ducks, geese, swans, doves, rails, shorebirds, and gallinaceous birds. Ninety-one species of birds are illustrated in the forty-eight colored plates. As in the previous volumes the colored plates are of unusual beauty. We believe that the smaller page, as compared with the earlier edition of the same work, and the smaller colored

plate exhibiting fewer species, is much more satisfactory from every point of view. The artistic work of Mr. Thorburn is remarkably clear and forceful. The backgrounds are adequate, and do not detract from the figures. The workmanship in reproducing the plates deserves a word of praise. While the plates furnish the chief interest in the work, the text is interesting and sufficient. We know of nothing on British birds that is likely to be more suitable for the casual reader than this work; and the plates are a genuine treasure.—T. C. S.

(1) The Status of the Subspecific Races of Branta Canadensis. By J. D. Figgins. *Auk*, XXXVII, 1920. Pp. 94-102.

(2) Additional Notes on the Status of the Subspecific Races of Branta Canadensis. By J. D. Figgins. Proc. Colo. Mus. Nat. Hist., IV, No. 3, Dec. 15, 1922. Pp. 1-19.

(3) Some Observations Relative to Hybrids and Intergradation. By J. D. Figgins. Proc. Colo. Mus. Nat. Hist., V, No. 1, June 19, 1925. Pp. 1-11.

(4) Some Observations Relative to Meteorological Influences. By J. D. Figgins. Proc. Colo. Mus. Nat. Hist., V, No. 2, July 20, 1925. Pp. 1-21

(5) "Twice Told Tales." By J. D. Figgins. Proc. Colo. Mus. Nat. Hist., V, No. 3, October 5, 1925. Pp. 1-31.

(6) A Reply. By J. D. Figgins. Proc. Colo. Mus. Nat. Hist., VI, No. 1, February 8, 1926. Pp. 1-7.

These papers may be said to represent an effort to show that the subspecies concept has been overworked, and that it has resulted in abuses and confusion. The discussion arising from these several papers will perhaps be of sufficient interest to our readers to justify the following resume.

(1) The author here considers the subspecies of *Branta canadensis*. In comparing *B. c. hutchinsi* with *B. c. occidentalis* he finds that they are separated by a difference in wing-length of .07 inch. Other authorities, he states, give a variation of 14 to 20 rectrices in *canadensis*, which is the same in *occidentalis*, while *hutchinsi* shows a variation of 14 to 18. Then follows a lengthy consideration of the color in the several subspecific forms, as described by various authorities. The author concludes "That it is not possible to identify a specimen as *hutchinsi* without disregarding strong evidence of its being either *canadensis* or *minima*. That such identification is largely a matter of personal preference—so-called *hutchinsi* being merely examples of *canadensis* that present one or two measurements below the minimum or specimens that are the result of a cross between *canadensis* and *minima*." Likewise, as far as measurements, number of rectrices, and color pattern are concerned, *occidentalis* is included within *canadensis*. The author concludes that *hutchinsi* and *occidentalis* are not valid subspecies, that *minima* and *canadensis* should be regarded as of specific rank, and that the "occasional 'inextricable' examples be recognized as hybrids."

A reply to this paper by Mr. Swarth[1] admits that "some of the characters first ascribed to the subspecies are unreliable", but claims that "The fact that the type specimen of *occidentalis* is not representative of the mode of that subspecies, as now defined, is obviously no reason why the form should not be

[1]The Subspecies of Branta canadensis (*Linnaeus*). By H. S. Swarth. *Auk*, XXXVII, 1920. Pp. 268-272.

recognized." Mr. Swarth prefers to "regard *Branta canadensis* as a variable species, divided into four recognizable subspecies, *canadensis*, *occidentalis*, *hutchinsi*, and *minima*", as now given in the A. O. U. Check-list. Willett[2] also affirms the validity of *occidentalis* as a subspecies, and believes that Mr. Figgins was "misled by the erroneous nature of the characters given by many authorities as distinguishing this from the other allied subspecies."

(2) In this paper Mr. Figgins recurs to the subject of hybridism, and points out certain cases in the Flicker, in snails, and in wild sheep, which are interpretable as hybrids, and which he regards as comparable to the facts presented concerning *Branta*. The breeding ranges of the races of *Branta* are then considered, and evidence is presented to show that the breeding ranges of *canadensis* and *minima* are connected and overlapped by the breeding range of *hutchinsi*. The breeding range of *occidentalis* seems to be undetermined.

(3) This paper is called forth by Mr. Swarth's reply in the *Auk*.[1] The author here goes into the subject of hybridism rather fully, discussing the cases of the Junco, Flicker, Mallards, deer, etc. The gist of the paper is that hybridism is of frequent occurrence and doubtless explains a good many of the described subspecific forms.

(4) The author describes two localities in Colorado about twenty miles apart. One is a lake and marsh region, the other is dry and arid. Towhees (*Pipilo*) breed in both localities, and at the beginning of the breeding season the Towhees in both these areas are identical in plumage color. Later in the season the birds in the arid foothills are found to be much paler than those of the humid area. The author selected three typical specimens from the humid lake region "identical in coloration and in no respect separable from the birds of the foothills, taken at the same time." These skins he subjected to different physical conditions. Specimen No. 1 was returned to the cabinet to be used as a control. Specimen No. 2 was placed in a *moist* box and kept in direct sunlight. Specimen No. 3 was placed in a similar *dry* box, and exposed to the same light conditions. At the end of twenty-eight days Specimen No. 2 was unchanged, while Specimen No. 3 "was faded to a remarkable degree—equal to the palest birds of the foothills, at the end of the breeding season." Here, the differences in color were traceable directly to climatic causes. The author does not think such differences are of subspecific value; they are the result of external factors, while proper subspecies should depend, at least in part, upon certain internal factors. He therefore distinguishes between environmental variations, as above, on the one hand, and true geographic races, on the other hand. The remainder of this paper presents additional cases in point.

(5) In this paper the author points to a number of instances of perpetuation of erroneous identification by repetition, until finally the errors were accepted officially. The paper also contains a brief discussion of the criteria of subspecies, wherein it is urged that definite standards and units be employed in distinguishing subspecies.

One other recent paper on this subject is one by Major Allan Brooks[3] in which he reviews some of the previous literature, and wherein he summarizes

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[2]Ornithological Notes from Southeastern Alaska. By George Willett. *Auk*, XXXVIII, 1921. Pp. 127-129.

the situation in five propositions, viz., (1) "It is impossible to identify the species from the points of differentiation laid down by their original describers." (2) "The series in most museums is very inadequate, and in every one of them it is safe to say that there are birds that are wrongly identified." (3) "This is largely the result of lack of acquaintance with Geese, which have far greater variation in size than most other birds, due to age and the longevity of their kind." (4) "Both breeding and winter ranges as given in the A. O. U. Check-list are in error." (5) "Few writers on the group have studied the species in life."

Major Brooks' conclusion is that *Branta canadensis, Branta hutchinsi,* and *Branta minima* are distinct and separate species; and that *Branta canadensis* is divisible into two subspecies, viz., *canadensis* and *occidentalis.*

Mr. Swarth contends that *Branta canadensis* is a variable species, which is divisible into four subspecies, *canadensis, occidentalis, hutchinsi,* and *minima,* as now recognized by the A. O. U. Check-list.

Mr. Figgins' position may be summed up in the proposal that *hutchinsi* and *occidentalis* should be retired to the hypothetical list until the breeding ranges and the causes of the enormous variation between *minima* and *canadensis* are understood, *hutchinsi* being but one stage of that variation.—T. C. S.

The volume V (1925) of the Proceedings of the Oklahoma Academy of Science (Univ. Okla. Bull., April 1, 1926) contains three articles on birds. (1). "Evidence of Increase in Certain Rare Species of Birds in Oklahoma", by R. O. Whintenton, in which some data are given concerning the Wood Duck, Avocet, Whistling Swan, Hudsonian Godwit, and Harlin's Hawk in Oklahoma. (2). "Some Materials Used in Nest Construction by Certain Birds of the Oklahoma Panhandle", by R. C. Tate, in which are presented notes on the materials and structure of the nests of twelve species of birds. The Magpie's nest is described as having a mud cup lined with rootlets. (3). "Some Bird Observations in Cleveland County in 1924", by Margaret M. Nice and L. B. Nice, in which notes are given on twenty-four species. The volume also contains interesting short lists of amphibians and reptiles for the State.—T. C. S.

The *Cardinal* is published by the Audubon Society of the Sewickley Valley, in western Pennsylvania. The issue for July, 1926, contains twelve pages of miscellaneous bird notes. One of the most interesting notes reports that South American Tinamus (*Nothura maculosa*) are being extensively imported into this country and used by restaurants under the name "imported quail." It seems that someone has slipped through a modification of the law prohibiting the importation of game birds; and these curious birds are being shipped into our country in quantities which seriously threaten their extermination. Some one should become interested in this matter. The leading article is a list of the mammals of the Sewickley region. The *Cardinal* is published twice a year, for which the subscription is fifty cents. Subscribers may address Mr. Frank Semple, Jr., Sewickley, Pa.

Bird Banding Notes, published by the U. S. Biological Survey and distributed to the volunteer co-operators in the bird banding work, has now reached No. 19.

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[3]Notes on the Geese of the Branta canadensis Group. By Allan Brooks, Col. M. B. O. U. *Ibis,* April, 1926. Pp. 339-346.

This is a mimeographed publication which contains a large amount of valuable information—most of which is found nowhere else. For this serial, and for the very efficient way in which the bird banding work of the government is being handled, we are indebted to Mr. F. C. Lincoln. Those who receive *Bird Banding Notes* should keep it intact and complete. In time it will be difficult or impossible to obtain early numbers, and then there will be plenty of demand for complete sets.

Nature Notes from the Yellowstone Park for March, April, May, June, and July have reached our desk. This publication, if it may be so called, is also printed by the mimeograph process, and has, in the June number, been reduced to letter size, which is better. We surmise that the credit for this energetic serial belongs to Mr. E. J. Sawyer, the Park Naturalist. It includes many short notes on all phases of the natural history of the Park.

We acknowledge the receipt of the 1926 *Bulletin of the Indiana Audubon Society*. In addition to several articles pertaining to bird study and bird protection this pamphlet contains important records of the recent occurrence in Indiana of the Starling, Harris's Sparrow, and Burrowing Owl, these notes being brought together by Amos W. Butler.

The *Maine Naturalist* for March, 1926, (VI, No. 1) contains the first instalment of an article on the "Birds of Brunswick, Maine", by J. Weston Walch, which is accompanied by a very excellent photograph of the Ruffed Grouse on its nest, by Dr. A. O. Gross. This creditable local magazine is edited by Arthur H. Norton, and is published quarterly at 22 Elm Street, Portland, Maine.

We have before us a set of four booklets dealing with four of the thirty-six Iowa State Parks, viz., Dolliver Memorial, Eldora Pine Creek, Pilot Knob, and the Ledges. These booklets describe the natural features of the parks, and include small maps, which in two instances, however, are rendered useless by being printed on purple cover paper. The reading matter includes a discussion of the history, physiography, and to some extent the natural history of the parks. The list of birds for the Eldora park is anonymous. No bird list is given for the Pilot Knob park or for the Dolliver park. The Ledges guide contains a list of the common, rare, and extinct birds, to the number of 204, by Carl Fritz Henning. This is a valuable list, and it should be republished with more complete annotations, because it will then make the most complete list of birds we have for the central part of the State.

NECROLOGY

On July 21, 1926, Frank M. Woodruff, Curator of the Chicago Academy of Sciences, and a well-known ornithologist of the Mississippi Valley, died at his home in Chicago. He was born at Leavenworth, Kansas, July 16, 1867. In 1884 he visited in Deer Park, Maryland, where he made a large collection of birds and mammals. In 1888 he was associated with Colonel Francis W. Parker at the Cook County Normal School, leaving there to assist in the collecting and mounting of the Illinois State Ornithological Exhibit at the World's Fair in 1893. From that time on he was connected with the Chicago Academy of Sciences. In 1907 the Chicago Academy published as a Bulletin his "Birds of the Chicago Area." He has also contributed other short papers to various scientific periodicals, including THE WILSON BULLETIN.—W. F. Worthley.

TO OUR CONTRIBUTORS

Our members are urged to submit articles for publication in the BULLETIN Short items are desired for the department of General Notes, as well as longer contributions, especially pertaining to life-history, migration, ecology, behavior, song, economic ornithology, field equipment and methods, etc. Local faunal lists are also desired, but they should be annotated, at least briefly, and should be based upon sufficient study to be reasonably complete. Authors are asked to include the common name, the scientific name (from the A. O. U. check-list), and annotations, and they should be arranged in this order. The annotations should include explicit data concerning unusual species. Omit serial numbering.

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Volume III. No. 1. April, 1891.

The Wilson Quarterly

Volume IV. No. 1. April, 1892. Out of print.
Volume IV. No. 2. July, 1892. Out of print.

The Journal

Volume 1. (V. No. 1). January, 1893.
Volume 2. (V. No. 2). June, 1893.

The Wilson Bulletin

Volume VI. 1894. Three numbers. Reprinted.
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